



ROTAREX
EQUIPMENT



SUPPLY AND SWITCH OVER BOARDS

TABLE OF CONTENTS

PRODUCT RANGE OVERVIEW	P.004
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TECHNOLOGY OVERVIEW	P.006
- Supply Boards	P.006
- Switch over Boards	P.006
- Quality Standards	P.007
- Pressure Regulator Technology	P.008

HOW TO CHOOSE A SUPPLY SYSTEM	P.013
- Technical Parameters	P.013
- Body Materials	P.014
- Seat Materials	P.014
- Inlet & Outlet Pressures	P.014
- Gauges	P.014
- Safety Relief Valves	P.015
- Other product options	P.015
- Cleaning	P.015

PRODUCTS	P.016
- Supply Boards	P.016
- Switch over Boards	P.030
- Accessories - Alarm Box	P.046
- Accessories - Pressure Gauges	P.048
- Accessories - Extension	P.054
- Accessories - Pigtail	P.056
- Accessories - Flexible Hose	P.057
- Accessories - Duobloc	P.058
- Accessories - SV10 Safety Relief Valve	P.060
- Accessories - Gas Cylinder Holder	P.063

REFERENCE CHARTS	P.064
- Gas compatibility	P.064
- Conversions	P.065



All Rotarex regulators are produced in Europe in accordance with international standards (ISO; CGA....) and are guaranteed to provide safe and reliable performance in operation. All locations are ISO 9001.

SUPPLY BOARDS


SERIES MOD P. 016

Technology	Diaphragm + Balanced Valve
Inlet Pressure	200/300 bar 2900/4350 psi
Outlet Pressure	10/16/30/50 bar 145/232/435/725 psi
Flow Rate Nm³/h (N₂)	200 bar: 70/110/150/180 300 bar: 50/70/100/130
Material	Raw Brass Chrome Plated Brass


SERIES CM 104 P. 018

Technology	Diaphragm
Inlet Pressure	200 bar 2900 psi
Outlet Pressure	10/25/50 bar 145/363/725 psi
Flow Rate Nm³/h (N₂)	10/10/50
Material	Stainless steel


SERIES CM 104 UC P. 020

Technology	Diaphragm
Inlet Pressure	200 bar 2900 psi
Outlet Pressure	15 bar 218 psi
Flow Rate Nm³/h (N₂)	25
Material	Stainless steel


SERIES CM 204 P. 022

Technology	Diaphragm
Inlet Pressure	200/300 bar 2900/4350 psi
Outlet Pressure	10/16 bar 145/232 psi
Flow Rate Nm³/h (N₂)	10
Material	Chrome plated brass Stainless steel


SERIES CM 204 COMPACT P. 024

Technology	Diaphragm
Inlet Pressure	200 bar 2900 psi
Outlet Pressure	10 bar 145 psi
Flow Rate Nm³/h (N₂)	10
Material	Raw Brass Chrome Plated Brass


SERIES CM 254/454 P. 026

Technology	Piston
Inlet Pressure	200 bar 2900 psi
Outlet Pressure	60/160 bar 870/2320 psi
Flow Rate Nm³/h (N₂)	10/30
Material	Chrome plated brass


SERIES CM 504 P. 028

Technology	Diaphragm + Balanced Valve
Inlet Pressure	200 bar 2900 psi
Outlet Pressure	10/25/50 bar 145/363/725 psi
Flow Rate Nm³/h (N₂)	50/50/100
Material	Chrome plated brass Stainless steel

SWITCH OVER BOARDS



SERIES CEN P. 030

Technology	Diaphragm + Balanced Valve
Inlet Pressure	200/300 bar 2900/4350 psi
Outlet Pressure	10/16/30/50 bar 145/232/435/725 psi
Flow Rate	200 bar: 70/110/150/180 300 bar: 50/70/100/130
Material	Raw Brass Chrome Plated Brass
Change Over	Semi-Automatic and Automatic



SERIES TD 100 P. 032

Technology	Diaphragm
Inlet Pressure	200 bar 2900 psi
Outlet Pressure	10/25/50 bar 145/363/725 psi
Flow Rate	10/10/50
Material	Stainless steel
Change Over	Manual and Semi-Automatic



SERIES TD 102 UC P. 034

Technology	Diaphragm
Inlet Pressure	200 bar 2900 psi
Outlet Pressure	10/25/50 bar 145/363/725 psi
Flow Rate	10/10/10
Material	Stainless steel
Change Over	Semi-Automatic



SERIES TD 200 P. 036

Technology	Diaphragm
Inlet Pressure	200/300 bar 2900/4350 psi
Outlet Pressure	10/16 bar 145/232 psi
Flow Rate	10/10
Material	Chrome plated brass Stainless steel
Change Over	Manual, Semi-Automatic, Automatic



SERIES TD 500 P. 040

Technology	Diaphragm + Balanced Valve
Inlet Pressure	200 bar 2900 psi
Outlet Pressure	10/25/50 145/363/725 psi
Flow Rate	50/50/50
Material	Chrome Plated Brass Stainless steel
Change Over	Manual, Semi-Automatic, Automatic



SERIES TD 502 COMPACT P. 044

Technology	Diaphragm + Balanced Valve
Inlet Pressure	300 bar 4350 psi
Outlet Pressure	8/15/40 bar 116/218/580 psi
Flow Rate	110
Material	Chrome plated brass
Change Over	Semi-Automatic

ACCESSORIES



BA 10 / BA 11 ALARM BOX P. 046



PRESSURE GAUGES P. 048



EXTENSIONS P. 054



PIGTAILS P. 056



FLEXIBLE HOSES P. 057



DUOBLOC P. 058



SV 10 SAFETY RELIEF VALVE P. 060



GAS CYLINDER HOLDER P. 063

TECHNOLOGY OVERVIEW

SUPPLY BOARDS

A **supply board** is used in a central gas supply system in order to reduce the cylinder pressure to an appointed secondary pressure. The supply board will then supply a stable pressure to line regulators or points of use.

A supply board can be considered like a simplified switch over board (without the continuous gas supply from several high-pressure sources).

Most of our supply boards have 3 common inlets available. This avoids installation of extensions and increases safety of the installation. Our products exist in raw brass, chrome plated or stainless steel. The installed regulators are coming from our standard product range.



TECHNOLOGY OVERVIEW (continued)

SWITCH OVER BOARDS

Rotarex switch over boards can make your source management easier. Our first target is to make your installation safer, easier-to-control and to help you improve cost productivity.

SAFETY:

- DUOBLOC: 4-6 cylinder connections possible w/o extension - to improve the global system tightness of the process and reduce leakage points. Also, with the DUOBLOC concept you can purge independently each side. The purge can also be collected.
- RELIEF VALVE: all supply and switch over boards are standardly equipped with a safety relief valve (one on semi-automatic version, 2 on fully automatic version).
- INVERTER (full automatic)/BYPASS DESIGN (semi automatic): Its design avoids gas flow into the other side.
- Dedicated pressure gauges (HP and LP). Contact gauges could also be mounted in order to connect to an alarm box.
- With installation of a gas monitoring system, you can easily check your gas consumption from your desk.

EASE OF HANDLING:

- Easy access of purging and isolation valve.
- Easy installation with all components pre-mounted on an Omega plate.
- All components for service are easily accessible.

LOWER OPERATING COSTS:

- A continuous gas supply to the process means less production interruptions or unplanned disruption to change gas cylinders.
- Larger cylinders together = fewer cylinders = lower rental charge, less transportation charge, better cylinder management.
- Grouping all cylinders in one location means also space saving in production area or in lab which are very expensive surfaces.

MANUAL SWITCH OVER BOARDS

A **manual switch over board** reduces the cylinder pressure to an appointed secondary pressure and insures gas supply from different high-pressure sources. It ensures a safe cylinder replacement.

When one high-pressure supply source is in service, the other is in reserve.

When the service source is empty, the operator must change the service side to the reserve side manually when changing the empty cylinder



TECHNOLOGY OVERVIEW

SEMI-AUTOMATIC SWITCH OVER BOARDS

A **semi-automatic switch over board** is a system which provides a continuous gas supply to the piping system. One source of gas is used as the primary source, while a second source is held in reserve.

When the primary source reaches a predetermined pressure, the reserve supply automatically begins to supply gas to the system.

Once the switch over occurs and primary source is replaced, the switch over board is reset, such that the reserve supply supplying gas is now designated as primary source and the secondary source is now held in reserve. The empty cylinder can be replaced without interrupting the gas flow.



AUTOMATIC SWITCH OVER BOARDS

An **automatic switch over board** switches automatically, when the service source is empty, to the reserve source and does not need to be reset to allow reversal of the cycle. A switch over board will reduce the cylinder pressure to an appointed secondary pressure and will insure continuous gas supply from several high-pressure sources.

This reduces the need for continuous operator monitoring and ensures a safe cylinder replacement. When one high-pressure supply source is in service, the others are in reserve. When the service source is empty, the switch over board switches automatically to the reserve source for a continuous gas supply to the process at the same pressure. The empty cylinder can be replaced without interrupting the gas flow.



HOW TO CHOOSE BETWEEN SEMI-AUTOMATIC AND FULL AUTOMATIC

WHEN SEMI-AUTOMATIC :

- For small installations with low gas consumption
- When the process is not sensible to pressure drop after the switch.
- When you want to change the cylinders at each switch.

WHEN AUTOMATIC :

- When the process needs stable delivery of outlet pressure (P2).
- When the installation has a huge gas consumption.
- When using bundles.
- When safety is paramount > reduction of operator presence.
- When less external intervention is desired for better productivity.
- For supply installations far away from the process.

TECHNOLOGY OVERVIEW (continued)

PREMIUM QUALITY FOR BETTER PERFORMANCE

All our regulators are designed respecting the EN ISO 2503. The production of the regulator is certified according to ISO 9001. Also external audits from customers help us to improve continually our products. This strategy is also applied on our supplier base which is working very closely with us in order to reach new standards and new performance.

In order to fulfil the customer expectations regarding quality, Rotarex implements state-of-the-art quality management practices used in the automotive industry in order to stay Best In Class.

During the production of your regulator we have several control steps in order to provide you the best quality:

- Supplier Audit in order to control that they fullfill our standards
- 100% cleaning of all parts to O₂ standards
- Steaming of some specific components
- Measurement control of parts coming from the production
- 100% Helium leak test
- 100% functional test

Most of the supply and switch over boards produced by Rotarex are designed for applications with gas purity up to 6.0 with a leak rate of 10⁻⁸ mbar l/s of helium.

FLOW MEASUREMENTS

Flow curves are based on the ISO EN 2503 Norm. The nominal flow are specified for the nominal inlet pressure with the regulator set at the nominal outlet pressure. The outlet flow will then decrease when the regulator is set at a lower outlet pressure than the nominal one.

For specific application, do not hesitate to contact us to get the exact flow at the wanted values.

SERVICE

In order to prevent possible contamination, we recommend that the operator performs a purging after the cylinder change. This maintenance step will help remove moisture, air and other impurities from the system before introduction of gas into the process. This maintains a constant purity in the circuit.

For some products like our supply/ switch over boards, it is recommended to perform an annual maintenance in order to prevent wearing of some components. Our customer service team remains at your disposal to supply special spare parts.

SAFETY

All products are tested under pressure and also leak-tested before shipment. Our high pressure regulators are also equipped with safety relief valves in order to prevent any damage of the regulator.

Important notice: the safety relief valve fitted on our regulators will only protect the regulator in case of accident and cannot be used to protect the down stream process. When it is needed to protect the down stream process, use a CE safety relief valve on the pipe work.

It is also possible to collect the purge on our equipment in order to avoid any gas dispersion in the atmosphere when using toxic gas.

TECHNOLOGY OVERVIEW (continued)

PRESSURE REGULATOR TECHNOLOGIES

Rotarex Supply Panels and Switch over Panels use 3 main pressure regulator technologies to achieve a stable and reliable pressure regulation:

BALANCED VALVE

- Best-in-class pressure stability
- Minimizes the effect of inlet pressure fluctuations on outlet pressure
- Increases regulator lifetime and reduces cost of ownership by reducing seat effort
- Diaphragm technology only

DIAPHRAGM

- Our most-used technology (cylinder regulation, line, supply panel...)
- Compact design
- Good precision

PISTON

- Stable outlet flow
- Used for regulator where the pressure outlet is close to the inlet pressure

BALANCED VALVE TECHNOLOGY

Our **Balanced-Valve Technology regulator** gives you dual stage regulator performance in a single stage design. Due to its proprietary design, it is able to balance the internal forces within the regulator and compensates for the pressure fluctuation on the inlet. It provides a constant outlet pressure like a dual stage regulator but with a lower total ownership cost.

Switch over boards equipped with this technology don't need any line regulator afterwards and can be connected directly to the application.

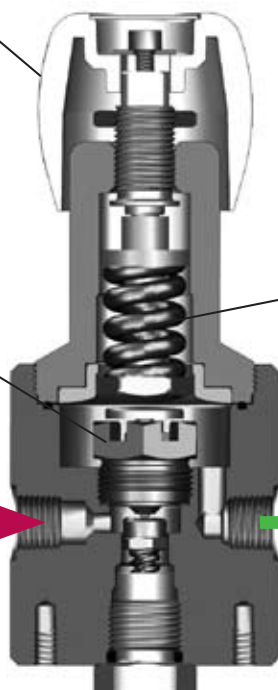
Ergonomic hand wheel
for pressure adjustment

BV Technology

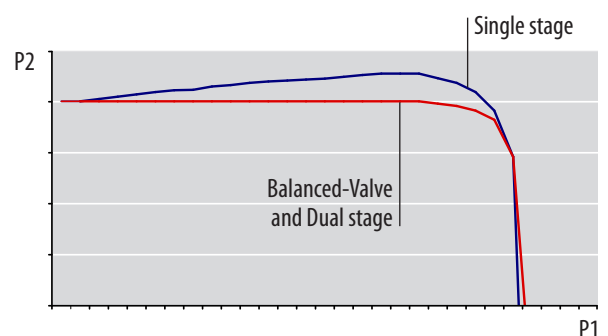
Spring applies
force on diaphragm

Inlet (P1)

Outlet (P2)

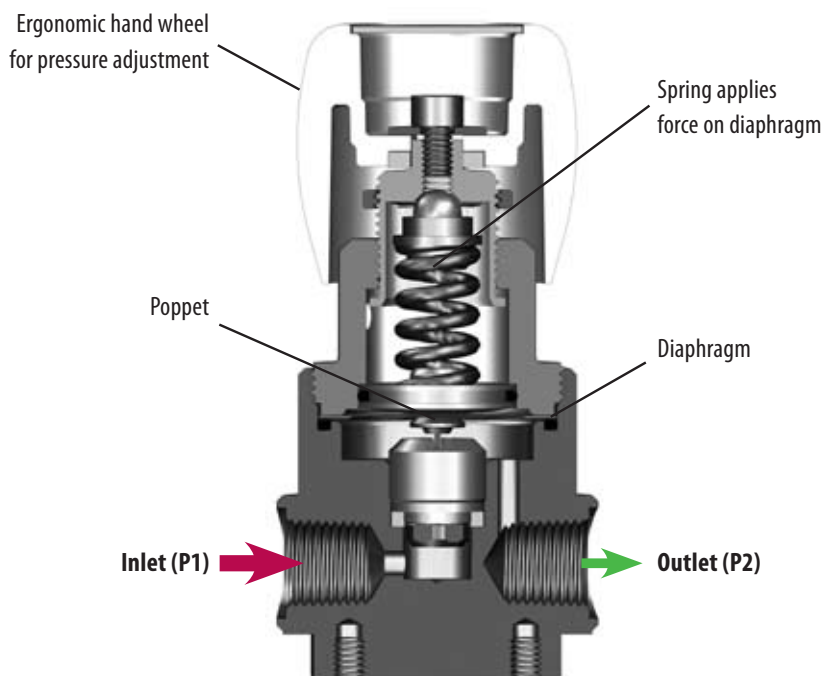


PRODUCT FINDER	
ROTAREX supply boards using BV technology	
Series MOD	P. 016
Series CM 504	P. 028
ROTAREX switch over boards using BV technology	
Series CEN	P. 030
Series TD 500	P. 040
Series TD 502 compact	P. 044



TECHNOLOGY OVERVIEW (continued)

DIAPHRAGM REGULATOR



PRODUCT FINDER

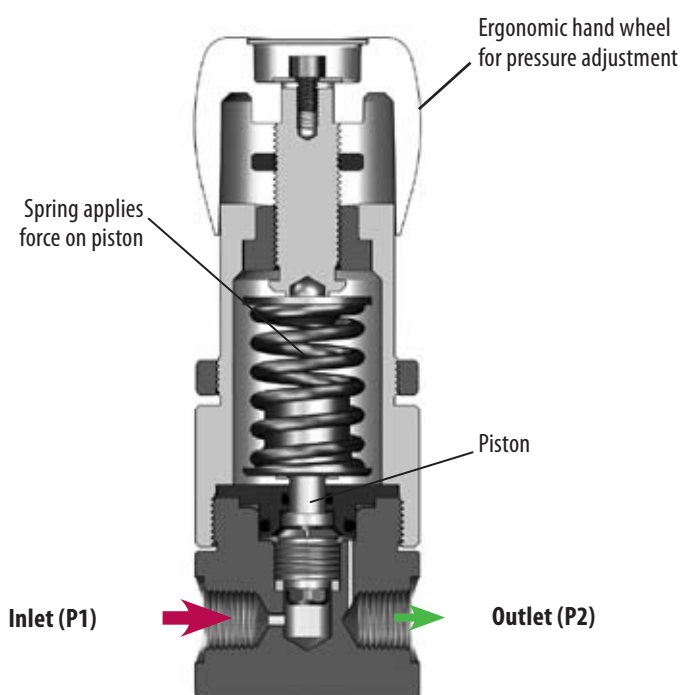
ROTAREX supply boards using diaphragm technology

Series CM 104	P. 018
Series CM 104 UC	P. 020
Series CM 204	P. 022
Series CM 204 compact	P. 024

ROTAREX switch over boards using diaphragm technology

Series TD 100	P. 032
Series TD 102 UC	P. 034
Series TD 200	P. 036

PISTON REGULATOR



PRODUCT FINDER

ROTAREX supply boards using diaphragm technology

Series CM 245/454	P. 026
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SELECTING THE RIGHT SUPPLY SYSTEM

To choose the right supply solution for your application, and to get the best results, you should identify the following technical parameters:

TECHNICAL PARAMETER	EXAMPLE
Gas	Inert, flammable, oxidizing, corrosive, toxic
Purity	UHP, HP, industrial, medical, diving
Nominal inlet pressure	Bar or psi
Nominal outlet pressure	Bar or psi
Nominal flow (N ₂)	Nm ³ /h or Nlpm
Single stage or dual stage ?	Dual stage or BV Technology are needed where pressure stability is essential
Product	Regulator, point of use, supply board, switch over board
Material	Brass, chrome plated brass, stainless steel
Inlet connection	Country of use, standard, connection
Outlet connection	G 3/8, 1/4 NPT, male, female, special
Gauges	Low pressure, high pressure, sliding, inductive
Safety device	Yes/no
Vacuum	Yes/no
Application	Food, electronic, medical, welding, industrial, diving...
Outdoor or indoor use	Environment
Temperature range	-20°C to +60°C / -4° F to +140°F
Atex use	Yes/no
Preset outlet pressure	If yes, which pressure ?
Marking	CE, TPED, PI

Each product page is designed to provide you the essential technical information at a glance:

SUPPLY BOARDS

200 LITRE BOARDS 19

SERIES CM 104 | SUPPLY BOARD

- Diaphragm single Stage
- Pump up to 6.0 l/min
- Inlet Pressure: 200 bar (2900 psi)
- Outlet Pressure: 145/160/172 psi
- 145/160/172 psi
- Armature (M4) version: P1 = 8 bar (116 psi), P2 = 3 bar (43.5 psi)

- 1 diaphragm
- 1 inlet valve
- Inlet/outlet pressure gauges
- 1 safety relief valve
- Single outlet
- Single inlet
- 22.22 l/min

APPLICATIONS

Used in combination with a switch-over board for the regulation of the emergency source during maintenance on the principal source. This area involving some extension and reducing the size of leaking points.

Suited for pure and corrosive gases for high-pressure applications - specifically dedicated to the supply of gas to analyzers and to the creation of a controlled atmosphere in laboratories, control units

GENERAL

• Possible to connect 2 gas cylinders and a gas purging operation (up to 3 cylinders without HP extension - without using the purging line). Ready to install with all components pre-mounted on a board.

• Can be equipped with a collection tube on the safety relief valve and purge outlet.

Also can be equipped with an outlet shut-off valve. The CM 104 can be connected to an alarm bus using contact points.

M4 version available

P1 = 8 bar/P2 = 3 bar/Q = 5 Nm/h.

SPECIFICATIONS

Fillable parts	6 l/min (inlet) or 4 l/min (outlet)	Weight	± 4.5 kg or ± 9.9 lbs.	Inlet pressure	200 bar (2900 psi) 160, 3 bar (174 psi)
Material	PTFE	Leak rate	10 ⁻⁷ mbar L/s	Outlet pressure	145/160/172 psi 145/160/172 psi 145/160/172 psi
Working pressure (inlet/outlet)	PTFE standard 100 bar	Temperature range	20°C to + 60°C 4°F to + 140°F	Nominal flow	10 to 150 Nm/h (P1) 10, 15, 30 Nm/h (P2)
Diaphragm	ASTM 304 stainless steel (304ss)	Gauges	High and low pressure (M10 x 1/4 NPT)	Dispersion	No

FLOW CURVES

Special materials on request

PRODUCT CONFIGURATION

Body Material	Inlet Pressure	Outlet Pressure	Outlet Connection	Working Material (inlet/outlet valve)	Gauges	Outlet Valve	Configuration
Stainless steel	100 bar	100 bar	1/4" NPT	PTFE standard	1	with or without shut-off valve (standard)	standard configuration
Stainless steel	100 bar	160 bar	1/4" NPT	PTFE standard	2	with or without shut-off valve	with "witness" - Backlash on right side
Stainless steel	100 bar	172 bar	1/4" NPT	PTFE standard	3	with or without shut-off valve	with "witness" - Backlash on right side
Stainless steel	100 bar	172 bar	1/4" NPT	PTFE standard	4	with or without shut-off valve	with "witness" - Backlash on right side
Stainless steel	100 bar	172 bar	1/4" NPT	PTFE standard	5	with or without shut-off valve	with "witness" - Backlash on right side
Stainless steel	100 bar	172 bar	1/4" NPT	PTFE standard	6	with or without shut-off valve	with "witness" - Backlash on right side

ROTAREX
SOLUTIONS

10/2024 CM 104

10/2024 CM 104

10/2024 CM 104

ROTAREX
SOLUTIONS

SELECTING THE RIGHT SUPPLY SYSTEM (continued)

BODY MATERIALS

Most Rotarex Supply and Switch over Boards are available in stainless steel 316L or chrome plated brass, and on some models, raw brass or aluminium. Which material is best for your installation?

Stainless steel 316L: The recommended option for corrosive gases and high-purity applications due to its superior resistance, non-reactivity, exceptional durability and high-surface finish properties. It is compatible with most gas types and low-velocity oxygen applications.

Rotarex uses stainless steel type 316L, an austenitic chromium nickel stainless steel containing Molybdenum. It offers:

- Exceptional corrosion resistance - particularly against sulfuric, hydrochloric; acetic, formic and tartaric acids, acid sulfates and alkaline chlorides
- resistance to pitting from chloride-ion solutions
- outstanding strength even at elevated temperatures

Chrome plated or Raw Brass: The most commonly used material for industrial and high velocity oxygen applications due to its cost effectiveness versus stainless steel, good strength, resistance and low-friction flow properties.

Need more information? You can find more detail about optional, materials on our website. Additionally, one of our material engineers would be happy to discuss the pros and cons of each option to help you choose the best solution.

www.rotarex.com



Gas Compatibility: Make sure the body material is compatible with the gas type you will be using. Consult the gas compatibility reference chart on page 64.

O-RING MATERIALS

For many regulators, a choice of O-ring materials is available:

- EPDM: Ethylene Propylene Rubber
- NBR: Nitrile Butadiene Rubber
- FPM: Fluorocarbon Rubber



Gas Compatibility: Make sure the O-ring material is compatible with the gas type you will be using. Consult the gas compatibility reference chart on page 64.

INLET/OUTLET PRESSURES

Different models are designed for different inlet and outlet pressure performance. The available options are clearly indicated on each product page. Please specify which inlet and outlet pressure when ordering. We can also accommodate special requests.

PRESSURE GAUGES

Most Rotarex supply and switch over boards are equipped with a choice of pressure gauges. High Pressure and/or Low Pressure - and sliding or induction versions. Check the product configurator table on each product page.

SELECTING THE RIGHT SUPPLY SYSTEM (continued)

SAFETY RELIEF VALVE

Safety relief valves are standard on most Rotarex supply and switch over boards as a safety best practice.

OTHER PRODUCT OPTIONS

Some product solutions have additional options specific to their unique application, such as contact gauges, outlet valves, configuration . . . etc. These options are clearly indicated on the product configuration table on each product page .

18 SUPPLY BOARDS

SERIES CM 104 | SUPPLY BOARD

Diaphragm single Stage

Purge up to 6.0

Inlet Pressure: 200 bar (2900 psi)

Outlet Pressure: 10/25/50 bar 145/363/725 psi

Ammonia (NH₃) version: P1 = 8 bar (116 psi) P2 = 3 bar (43.5 psi)

1 diaphic

1 inlet/1 outlet

inlet/outlet pressure gauges

1 safety relief valve

1 purge outlet

equipped with 5/2-2/2-regulator

Special requirements on request



APPLICATIONS

Used in combination with a switch-over board for the regulation of the emergency source during maintenance on the principal source. This avoids installing some extension and reducing the amount of leaking points.

Suited for pure and corrosive gases for high purity applications - specifically dedicated to the supply of gas to analyzers and for the creation of controlled atmosphere in laboratories, control units.

GENERAL

Possible to connect 2 gas cylinders and a gas for purging operation (up to 3 cylinders without any extension - without using the purge line).

Ready to install with all components pre-mounted on a board.

Can be equipped with a collection tube on the safety relief valve and purge outlet.

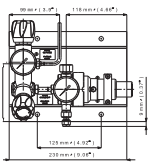
Also can be equipped with an outlet shut-off valve.

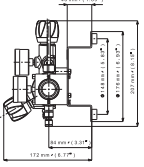
The CM 104 can be connected to an alarm box using contact gauges.

NH₃ version available.

P1 = 8 bar/P2 = 3 bar/Q = 5 Nm³/h.





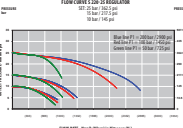


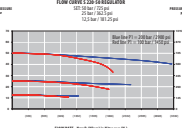
SUPPLY BOARDS 19

SPECIFICATIONS

Female ports	1/4" (inlet/outlet) or 1/2" NPT (inlet/outlet)	Weight	± 4.5 kg ± 9.9 lbs	Inlet pressure	200 bar (2900 psi) 100, 5 bar (154 psi)
Seat seal	PTFE	Leak rate	10 ⁻⁹ mbar L/s He	Outlet pressure	10/25/50 bar 145/363/725 psi 10/25 bar NH ₃ (P1) 10/3 bar NH ₃ (P2)
Body	SP300 - standard 300 FPM	Temperature range	-35 °C to +85 °C -25 °F to +185 °F	Maximal flow	10/15 Nm ³ /h (P1) 10/5 Nm ³ /h (P2)
Diaphragm	405 304 Hastelloy® (300 bar)	Gauges	High and low pressure (0/10 x 1 or 1/2 NPT)	Dropper use	No

FLOW CURVES





PRODUCT CONFIGURATOR

Body Material	Outlet Pressure	Inlet Connection	Outgoing Material Safety relief valve	Gauges	Outlet Valve	Configuration
Standard CM 104	10 bar 145 psi	1/4" female	6" SP300 - standard	with purges - standard	1 without outlet shut-off valve (standard)	NV standard configuration
	25 bar 363 psi	1/2" NPT female	NH ₃	with HP inductive contact gauge	2 with outlet shut-off valve	V "version" version - double lock on right side
	50 bar 725 psi	3/4" NPT female	FFM	with HP inductive contact gauge		with connected purge and safety valve
Ammonia optional version (P2 = 3 bar)				with HP inductive contact gauge	4	"super" with connected purge and 5.5
				with HP 1/2" inductive contact gauge	5	
				with HP 1/2" inductive contact gauge	6	

CLEANING

All products, regardless of gas application, are cleaned to remove all traces of residue and grease using the same procedures as for O₂ use. There is no need to specify special cleaning when ordering.

ROTAREX EQUIPMENT

ALL RIGHTS OF CHANGE RESERVED

NOTES

[illegible]

SERIES MOD | SUPPLY BOARD

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 5.5 (6.0 without the ball valve)
- Inlet pressure:
200 bar (2900 psi)
or 300 bar (4350 psi)
- Outlet pressure:
10/16/30/50 bar
145/232/435/725 psi

- ★ 1 duobloc
- ★ 3 inlets/1 outlet
- ★ Inlet/outlet pressure gauges
- ★ 1 safety relief valve
- ★ 1 purge outlet
- ★ O₂ application compatible (see technical data)
- ★ Acetylene version available
- ★ Propane version available

Special requirements on request

APPLICATIONS

- Used in combination with a switch over board for the regulation of the emergency source during maintenance on the principal source. This avoids installing extensions and reduces the amount of leaking points.
- Suitable for the high flow supply of industrial gases except toxic and corrosive gases.

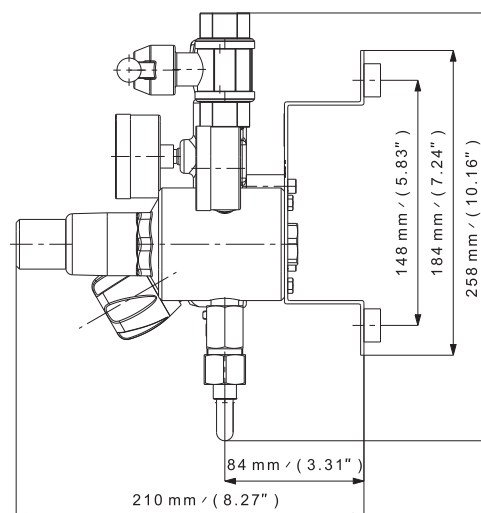
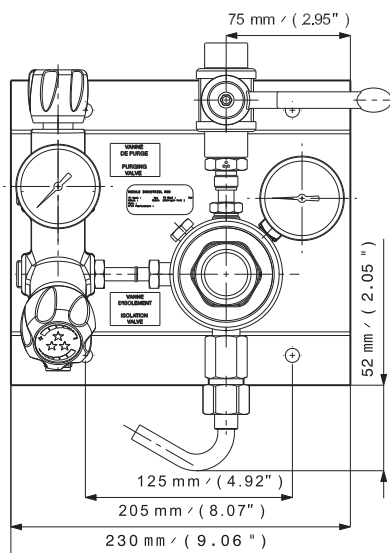
KEY FEATURES

- Possible to connect 2 gas cylinders and a gas for purging operation (up to 3 cylinders without any extension - without using the purge line).
- Ready to install: all components are pre-mounted on a board.

- Best-of-class pressure stability with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure are minimized. Balanced-Valve Technology enables the delivery of a very stable outlet pressure and flow even with high flow line regulators.
- Non-whipping filter improves safety of the operator during the cylinder replacement.
- Can be equipped with an outlet ¼ turn shut-off valve (Multi-turn valve with 30 bar or 50 bar version for oxygen use).
- Can be connected to an alarm box using contact gauges.
- Acetylene version available:
P1 = 25 bar / P2 = 1 bar / Q = 6,5 Nm³/h.
- For use with acetylene this product must be installed with a flash back arrestor complying with the standard EN 730 located downstream.
- Propane version available:
P1 = 25 bar / P2 = 4 bar / Q = 10 Nm³/h.



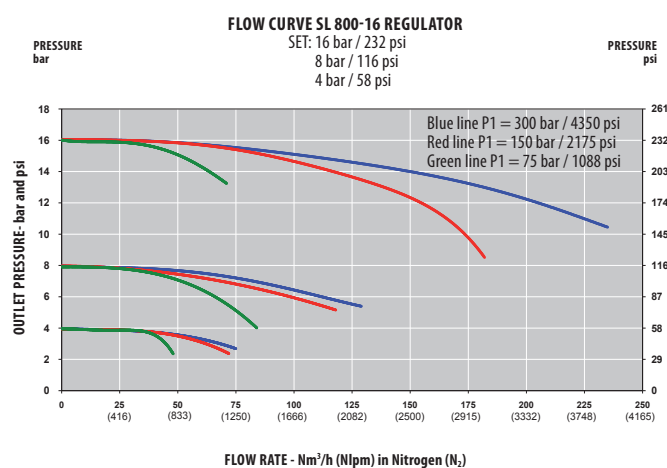
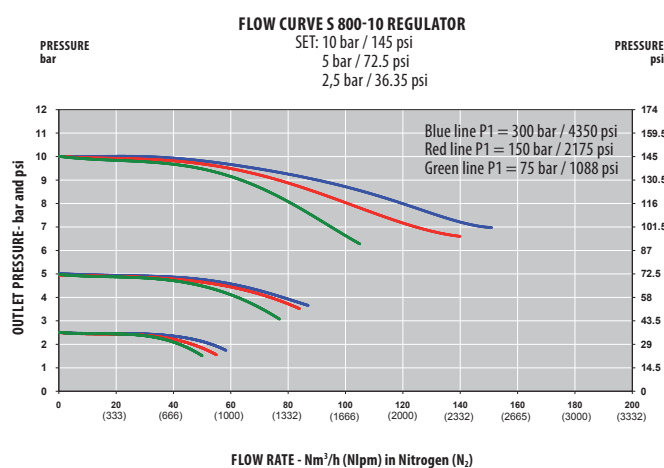
3 inlet ports



SPECIFICATIONS

Female ports	In: G 3/8 - Out: G 1/2 In: NPT 3/8 - Out: G 1/2	Leak rate	w/outlet valve: 1.10 ⁻⁴ mbar ℓ/s He w/o outlet valve: 1.10 ⁻⁸ mbar ℓ/s He	Inlet pressure	200 bar / 300 bar 2900 psi / 4350 psi AD and PR4: 25 bar (362.5 psi)
Seat seal	PCTFE	Temperature range	-20°C to +60°C -4°F to +140°F	Outlet pressure	10/16/30/50 bar 145/232/435/725 psi AD: 1 bar (14.5 psi) PR4: 4 bar (58 psi)
O-ring	EPDM - Standard NBR FPM	Gauges	High and low pressure (M10 x 1 or G 1/4)	Nominal Flow 200 bar version	70/110/150/180 Nm³/h (N₂)
Diaphragm (regulator)	AISI 304 or Hastelloy®			Nominal Flow 300 bar version	50/70/100/130 Nm³/h (N₂)
Weight	± 6,0 kg ± 13.0 lbs			Nominal Flow AD and PR4	AD: 6,5 Nm³/h PR4: 10 Nm³/h
				Oxygen use	OK with inlet pressure 200 and 300 bar

FLOW CURVES



PRODUCT CONFIGURATOR

Inlet pressure	Outlet	Body Material	End Connections	O-ring Material	Gauges	Fix or adjustable Outlet Pressure	Outlet valve	Configuration
MOD300	16	L	G	EPDM	1	FX	V	A
200 bar 2900 psi	200 10 bar 145 psi	Raw brass	LB In: G 3/8 Out: G 1/2 Female	EPDM - Standard	With gauges - standard	1 With fixed P2 (standard)	FX With outlet shut-off valve	V Standard configuration
300 bar 4350 psi	300 16 bar 232 psi	Chrome plated brass	L In: NPT 3/8 Out: G 1/2 Female	NBR	2 With HP inductive contact gauge	2 With adjustable P2 (handwheel)	ADJ Without outlet shut-off valve	NV "Mirror" version - duobloc on right side
	30 bar 435 psi			FPM	3 With HP sliding contact gauge			With connected purge
	30 bar 435 psi oxygen use				4 With LP inductive contact gauge			"Mirror" with connected purge
	50 bar 725 psi				5 With LP sliding contact gauge			
	50 bar 725 psi oxygen use				6 With HP & LP inductive contact gauges			
	Acetylene special version (P2 = 1 bar)							AD
	Propane special version (P2 = 4 bar)							PR4

SERIES CM 104 | SUPPLY BOARD

- Diaphragm single Stage
- Purity up to 6.0
- Inlet Pressure:
200 bar (2900 psi)
- Outlet Pressure:
10/25/50 bar
145/363/725 psi
- Ammonia (NH₃) version:
P1 = 8 bar (116 psi)
P2 = 3 bar (43.5 psi)

- ★ 1 duobloc
- ★ 3 inlets/1 outlet
- ★ Inlet/outlet pressure gauges
- ★ 1 safety relief valve
- ★ 1 purge outlet
- ★ Equipped with
SI 220 regulator
- ★ Only in stainless steel

Special requirements on request

APPLICATIONS

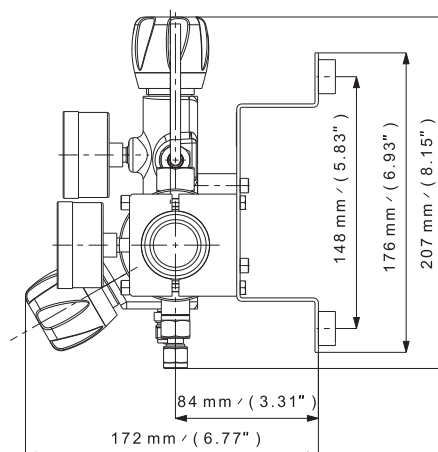
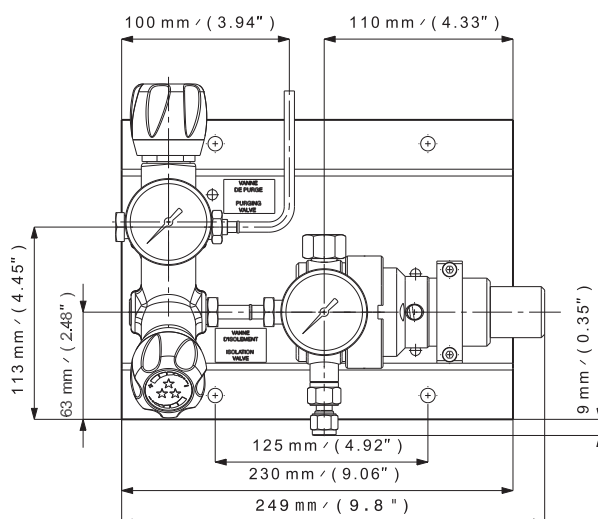
- Used in combination with a switch over board for the regulation of the emergency source during maintenance on the principal source. This avoids installing some extension and reducing the amount of leaking points.
- Suited for pure and corrosive gases for high purity applications
- Specifically dedicated to the supply of gas to analyzers and to the creation of controlled atmosphere in laboratories, control units.

KEY FEATURES

- Possible to connect 2 gas cylinders and a gas for purging operation (up to 3 cylinders without any extension - without using the purge line).
- Ready to install with all components pre-mounted on a board.
- Can be equipped with a collection tube on the safety relief valve and purge outlet.
- Also can be equipped with an outlet shut-off valve.
- The CMI 104 can be connected to an alarm box using contact gauges.
- NH₃ version available:
P1 = 8 bar/P2 = 3 bar/Q = 5 Nm³/h.



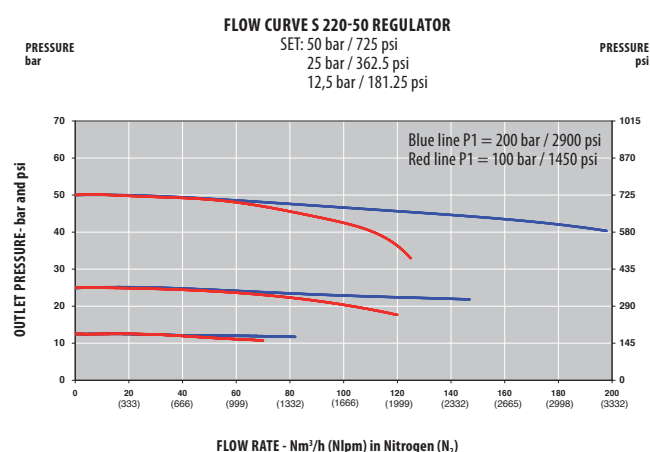
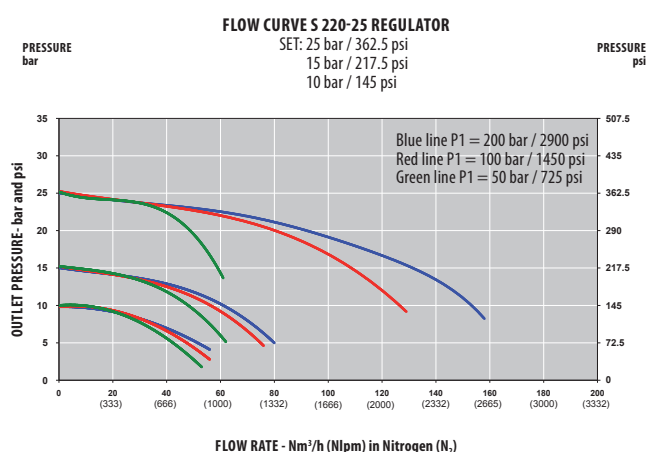
3 inlet ports



SPECIFICATIONS

Female ports	G 3/8 (inlet/outlet) or 1/4 NPT (inlet/outlet)	Weight	± 4,5 kg ± 9.9 lbs	Inlet pressure	200 bar (2900 psi) NH ₃ : 8 bar (116 psi)
Seat seal	PCTFE	Leak rate	10 ⁻⁸ mbar ℓ/s He	Outlet pressure	10/25/50 bar 145/363/725 psi NH ₃ : 3 bar (43.5 psi)
O-ring (safety relief valve)	EPDM - standard NBR FPM	Temperature range	-20°C to + 60°C -4°F to + 140°F	Nominal Flow	10/10/50 Nm ³ /h (N ₂) NH ₃ : 5 Nm ³ /h (NH ₃)
Diaphragm	AISI 304 Hastelloy® (50 bar)	Gauges	High and low pressure (M10 x 1 or 1/8 NPT)	Oxygen use	No

FLOW CURVES



PRODUCT CONFIGURATOR

Body Material		Outlet Pressure	End Connections	O-ring Material (safety relief valve)	Gauges	Outlet Valve	Configuration
CMI	104	10	G	EPDM	1	NV	A
Stainless steel	CMI	10 bar 145 psi	10 G 3/8 - Female	EPDM - standard	with gauges - standard	without outlet shut-off valve (standard)	standard configuration
		25	25 NPT 1/4 - Female	NBR	with HP inductive contact gauge	with outlet shut-off valve	"mirror" version - duoblock on right side
		50		FPM	with HP sliding contact gauge		with connected purge and safety valve
		NH ₃			with LP inductive contact gauge		"mirror" with connected purge and S.V.
					with LP sliding contact gauge		
					with HP & LP sliding contact gauges		

SERIES CM 104 UC | ULTRA CLEAN SUPPLY BOARD

- Diaphragm single stage
- UHP applications
- Inlet pressure:
200 bar (2900 psi)
- Outlet pressure:
15 bar (218 psi)

- ★ 1 straight duobloc Ultra Clean
- ★ 2 inlets/1 outlet
- ★ 1 outlet face seal ¼ turn shut-off valve
- ★ Inlet/outlet pressure gauges
- ★ 1 purge outlet
- ★ 1 burst disc
- ★ Regulation done by a SI 220 Ultra Clean regulator

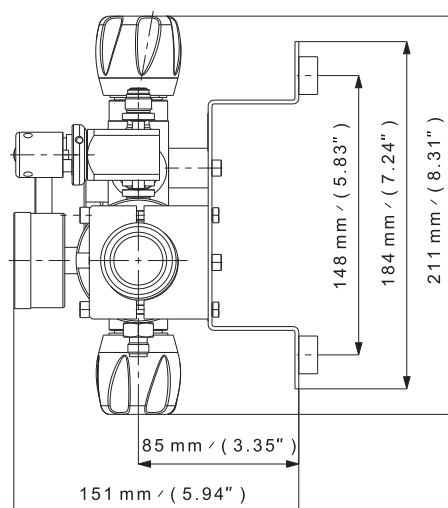
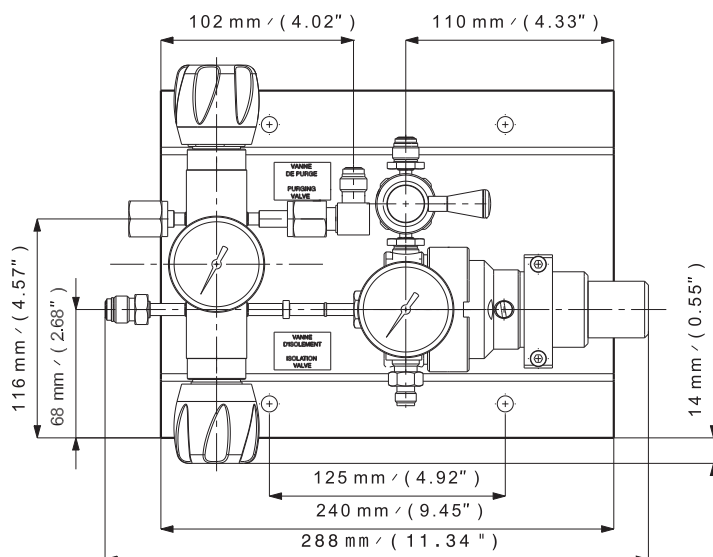
Special requirements on request

APPLICATIONS

- Used in combination with a switch over board for the regulation of the emergency source during maintenance on the principal source. This avoids installing some extension and reducing the amount of leaking points.
- Ideally suited for pure and corrosive gases for high purity applications - primarily dedicated to the supply of gas to analyzers and to the creation of controlled atmosphere in laboratories, control units.

KEY FEATURES

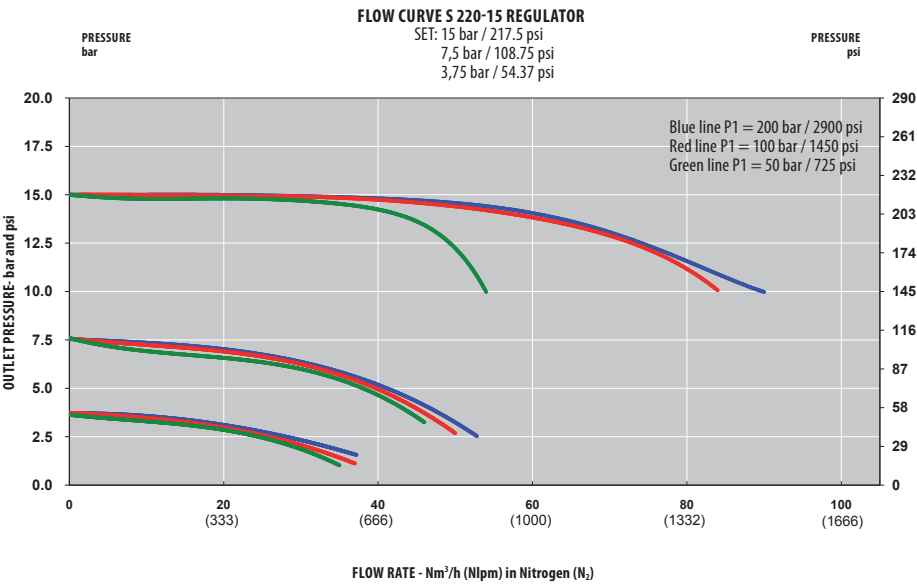
- Possible to connect 1 gas cylinder and a gas for purging operation.
- Ready to install with all components pre-mounted on a board.
- The CMI 104 can be connected to an alarm box using a contact gauge.



SPECIFICATIONS

Female ports	¼ face seal (inlet/outlet)	Weight	± 4,5 kg ± 9.9 lbs	Inlet pressure	200 bar 2900 psi
Surface finish	< 0.4 µm Ra (15 µin Ra)	Leak rate	10 ⁻⁹ mbar ℓ/s He	Outlet pressure	15 bar 218 psi
Seat seal	PCTFE	Temperature range	-20°C to + 60°C -4°F to + 140°F	Nominal Flow	25 Nm³/h (N₂)
Diaphragm	Hastelloy®	Gauges	High and low pressure (¼ face seal)	Oxygen use	No

FLOW CURVES



PRODUCT CONFIGURATOR

Body Material				Gauges	
	104	UC	15	1	
Stainless steel	CMI			with gauges - standard	1
				with HP inductive contact gauge	2
				with HP sliding contact gauge	3
				with LP inductive contact gauge	4
				with LP sliding contact gauge	5
				with HP & LP sliding contact gauges	6

SERIES CM 204/304 | SUPPLY BOARD

- Diaphragm single stage
- Purity up to 6.0
- Inlet pressure:
200 bar (2900 psi)
or 300 bar (4350 psi)
- Outlet pressure:
10 bar (145 psi)
or 16 bar (232 psi)
- Acetylene (C_2H_2) version:
P1 = 20 bar (290 psi)
P2 = 1 bar (14.5 psi)

- ★ 1 duobloc
- ★ 3 inlets/1 outlet
- ★ Inlet/Outlet pressure gauges
- ★ 1 safety relief valve
- ★ 1 purge outlet
- ★ O_2 application compatible (200 bar version)
- ★ Series 215 regulator integrated

Special requirements on request



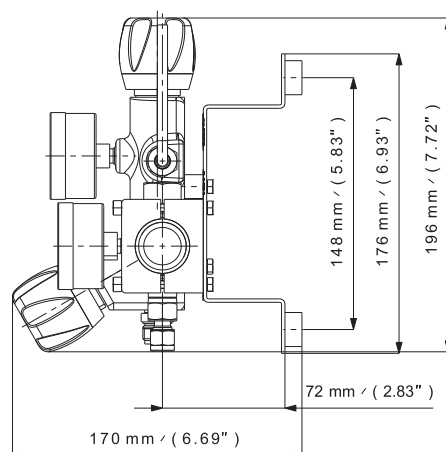
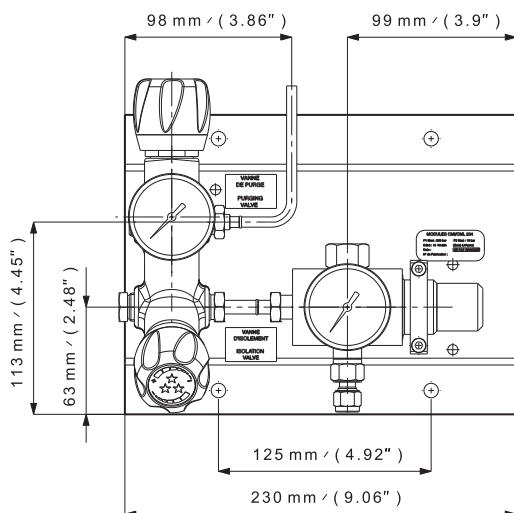
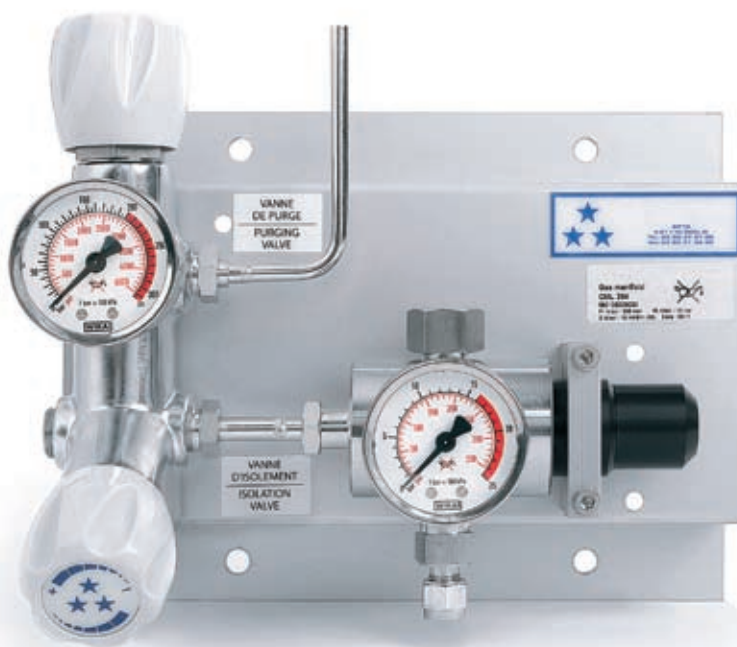
3 inlet ports

APPLICATIONS

- Used in combination with a switch over board for the regulation of the emergency source during maintenance on the principal source. This avoids installing extensions and reduces the amount of potential leak-points.
- Ideally suited for pure and corrosive gases for high purity applications dedicated to the supply of gas to analyzers and to the creation of controlled atmosphere in laboratories, control units, and for petrochemical application.
- Acetylene version is recommended for atomic absorption analyzers.

KEY FEATURES

- Possible to connect 2 gas cylinders and a gas for purging operation (up to 3 cylinders without any extension - without using the purge line).
- Ready to install with all components are mounted on a board.
- The CM 204 can be connected to an alarm box using contact gauges.
- Can be equipped with a collection tube on the safety relief valve and purge outlet.
- Can also be equipped with an outlet shut-off valve.
- Acetylene version available:
P1 = 20 bar / P2 = 1 bar / Q = 1 Nm³/h.
- For use with acetylene this product must be installed with a flash back arrestor complying with the standard EN 730 located downstream.

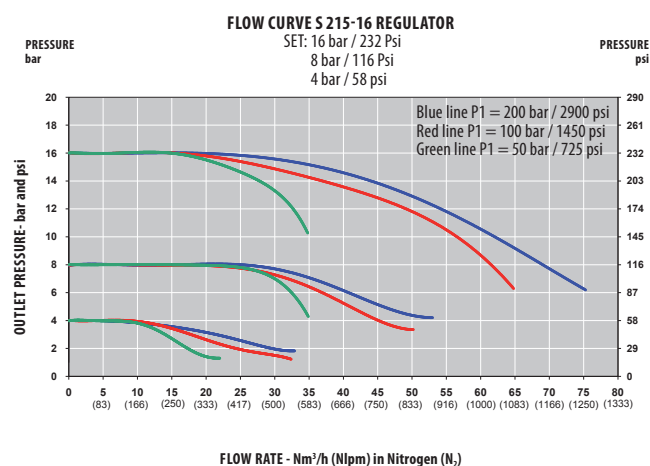
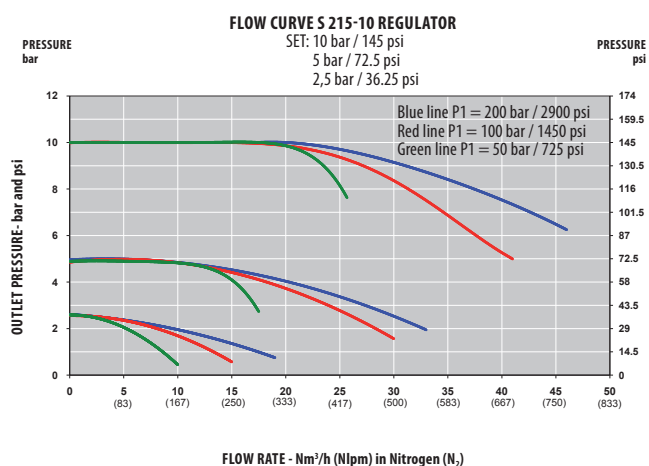


SPECIFICATIONS

Female ports	G 3/8 (inlet/outlet) or 1/4 NPT (inlet/outlet)	Weight	± 4,5 kg ± 9.9 lbs	Inlet pressure	200 bar / 300* bar 2900 psi / 4350 psi AD: 20 bar (290 psi)
Seat seal	PCTFE	Leak rate	10 ⁻⁸ mbar ℓ/s He	Outlet pressure	10/16 bar 145/232 psi AD: 1 bar (14.5 psi)
O-ring	EPDM - standard NBR FPM	Temperature range	-20°C to + 60°C -4°F to + 140°F	Nominal Flow	10 Nm³/h (N₂) 1 Nm³/h (C₂H₂)
Diaphragm	AISI 304 Hastelloy®	Gauges	High and low pressure (M10 x 1 or 1/8 NPT)	Oxygen use	OK for brass and stainless steel, only with 200 bar inlet pressure

*Only in chrome plated version

FLOW CURVES



PRODUCT CONFIGURATOR

Body Material	Inlet Pressure	Outlet Pressure	End Connections	O-ring Material	Gauges	Outlet Valve	Configuration
CML	204	10	G	EPDM	1	NV	A
Chrome Plated Brass	CML 200 bar 2900 psi	204 10 bar 145 psi	G 3/8 - Female	EPDM - standard	1 with gauges - standard	without outlet shut-off valve (standard)	standard configuration
Stainless steel	CMI 300* bar 4350 psi	304 16 bar 232 psi	NPT 1/4 - Female	NBR	2 with HP inductive contact gauge	with outlet shut-off valve	"mirror" version - duoblock on right side
		AD Acetylene version 1 bar (14.5 psi)		FPM	3 with HP sliding contact gauge		with connected purge and safety valve
					4 with LP inductive contact gauge		"mirror" with connected purge and S.V.
					5 with LP sliding contact gauge		
					6 with HP & LP sliding contact gauges		

*Only in chrome plated version

SERIES CM 204 COMPACT | SUPPLY BOARD

- Diaphragm single stage
- Purity up to 6.0
- Inlet Pressure:
200 bar (2900 psi)
- Outlet Pressure:
10 bar (145 psi)
- Acetylene (C_2H_2) version:
P1 = 20 bar (290 psi)
P2 = 1 bar (14.5 psi)

- ★ 1 inlet/1 outlet
- ★ Inlet/outlet pressure gauges
- ★ 1 safety relief valve
- ★ SL/SI 215 regulator integrated

Special requirements on request

APPLICATIONS

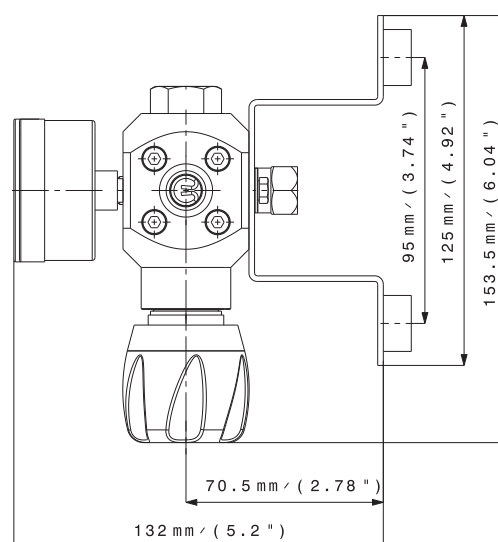
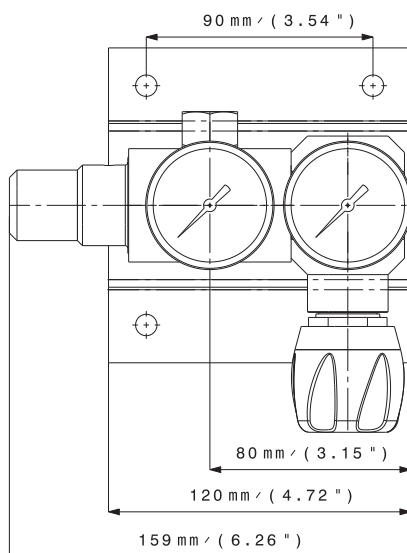
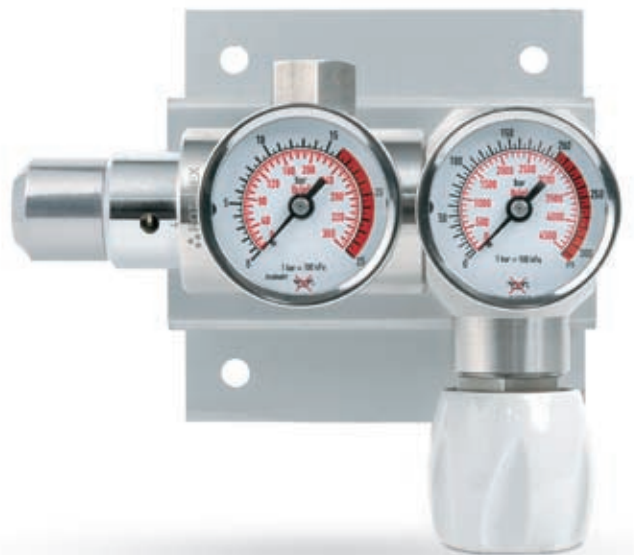
- Used in combination with a switch over board for the regulation of the emergency source during maintenance on the principal source. This avoids installing extensions and reduces the amount of potential leak-points.
- Ideally suited for high purity gases in laboratories and petrochemical industries.

KEY FEATURES

- Ready to install due with all components pre-mounted on a board.
- Compact and ergonomic design make this supply board suitable for laboratories furniture.
- Can be connected to an alarm box using contact gauges.
- Acetylene version available:
P1 = 20 bar/ P2 = 1 bar/ Q = 1 Nm³/h.
- For use with acetylene this product must be installed with a flash back arrestor complying with the standard EN 730 located downstream.



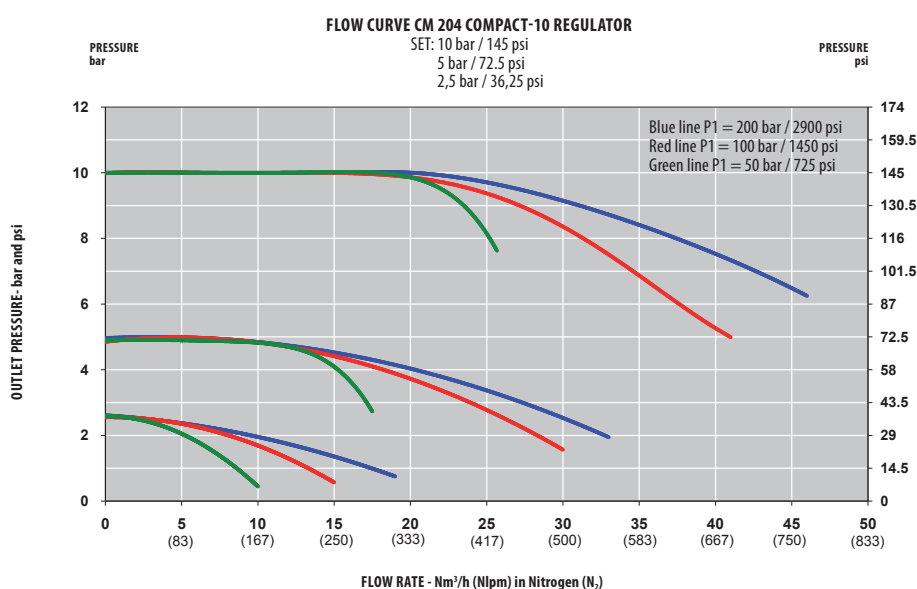
1 inlet port



SPECIFICATIONS

Female ports	G 3/8 (inlet/outlet) or 1/4 NPT (inlet/outlet)	Weight	± 4,5 kg ± 9.9 lbs	Inlet pressure	200 bar (2900 psi) AD: 20 bar (290 psi)
Seat seal	PCTFE	Leak rate	10 ⁻⁸ mbar ℓ/s He	Outlet pressure	10 bar (145 psi) AD: 1 bar (14.5 psi)
O-ring	EPDM - standard NBR FPM	Temperature range	-20°C to + 60°C -4°F to + 140°F	Nominal Flow	10 Nm ³ /h (N ₂) 1 Nm ³ /h (C ₂ H ₂)
Diaphragm	AISI 304 Hastelloy®	Gauges	High and low pressure (M10 x 1 or 1/8 NPT)	Oxygen use	No

FLOW CURVES



PRODUCT CONFIGURATOR

Body Material		Outlet Pressure		End Connections		O-ring Material	Gauges	
CML	204 COMPACT	10		G		EPDM	1	
Chrome Plated Brass	CML	10 bar 145 psi	10	G 3/8 - Female	G	EPDM - standard	with gauges - standard	1
Stainless steel	CMI	Acetylene version 1 bar (14.5 psi)	AD	NPT 1/4 - Female	N	NBR	with HP inductive contact gauge	2
						FPM	with HP sliding contact gauge	3
							with LP inductive contact gauge	4
							with LP sliding contact gauge	5
							with HP & LP sliding contact gauges	6

SERIES CM 254 / CM 454 | SUPPLY BOARD

- Piston single stage
- Purity up to 6.0
- Inlet Pressure:
200 bar (2900 psi)
- Outlet Pressure:
60 bar (870 psi)
or 160 bar (2320 psi)

- ★ 1 duobloc
- ★ 3 inlets/1 outlet
- ★ Inlet/outlet pressure gauges
- ★ 1 purge outlet
- ★ O₂ application compatible
- ★ SL 250 regulator integrated (CM 254)
- ★ SL 400 regulator integrated (CM 454)

Special requirements on request

APPLICATIONS

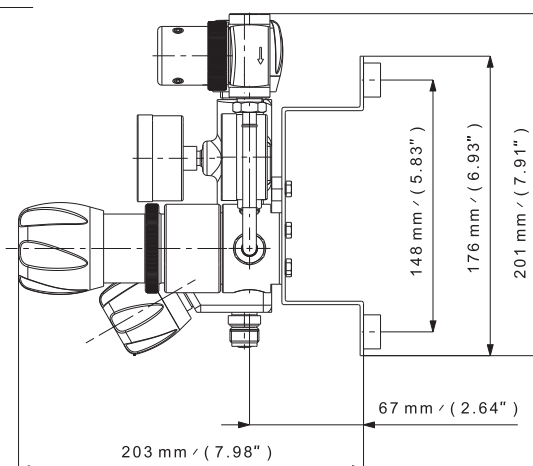
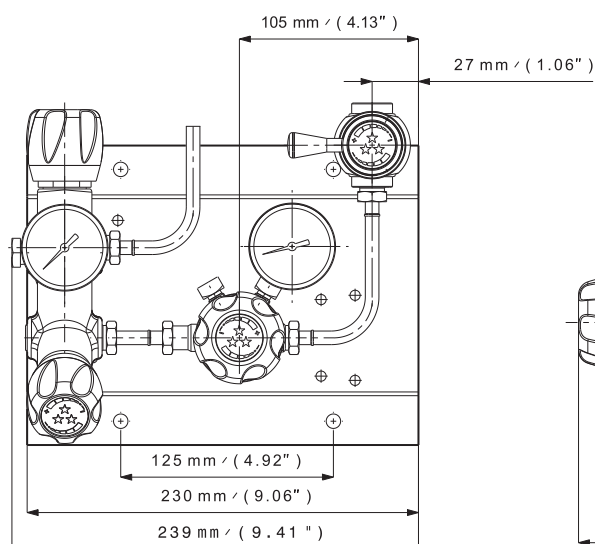
- Ideally suited for pure gases for high purity applications to put vessels under pressure and for leak detection and purge of pipe work.
- Used in combination with a switch over board for the regulation of the emergency source during maintenance on the principal source. This avoids installing some extension and reducing the amount of leaking points.

KEY FEATURES

- Adjustable outlet pressure
- Possible to connect 2 gas cylinders and a gas for purging operation (up to 3 cylinders without any extension - without using the purge line).
- Ready to install with all components pre-mounted on a board.
- Connectable to an alarm box using contact gauges.
- Can also be equipped with a ¼ turn shut-off valve on the outlet.
- Collection tube available on the safety relief valve and purge outlet.
- Downstream regulation system can be decompressed by turning the hand wheel counter-clockwise.



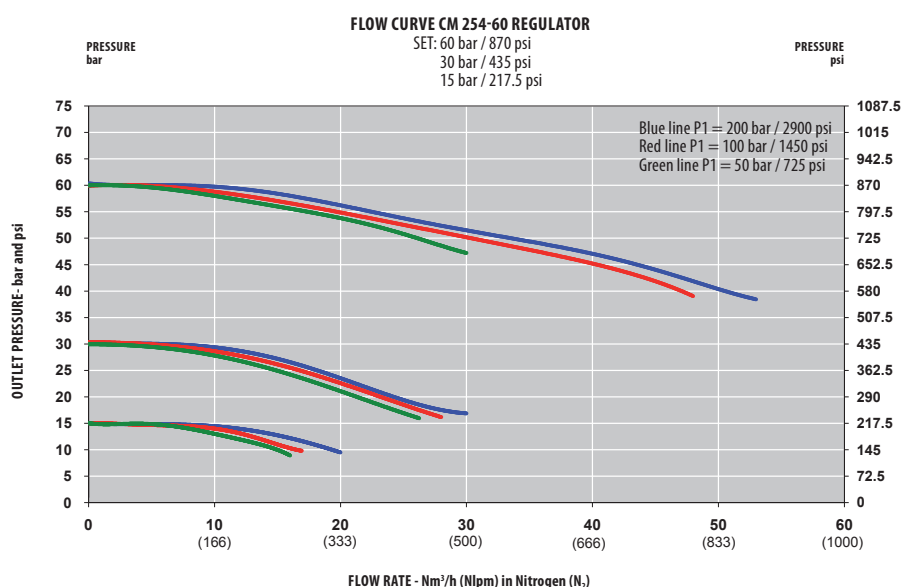
3 inlet ports



SPECIFICATIONS

Female ports	G 3/8 (inlet/outlet)	Weight	± 4,5 kg ± 9.9 lbs	Inlet pressure	200 bar 2900 psi
Seat seal	PCTFE	Leak rate	10 ⁻⁸ mbar ℓ/s He	Outlet pressure	60/160 bar 870/2320 psi
O-ring	NBR - standard EPDM FPM	Temperature range	-20°C to + 60°C -4°F to + 140°F	Nominal Flow	10/30 Nm ³ /h (N ₂)
Piston	AISI 316L	Gauges	High and low pressure (M10 x 1)	Oxygen use	OK for brass with 200 bar inlet pressure

FLOW CURVES



PRODUCT CONFIGURATOR

Body Material	Outlet Pressure	End Connections	O-ring Material	Gauges	Outlet valve	Configuration
CML	454	G	NBR	1	V	A
Chrome Plated Brass	60 bar 870 psi	G 3/8 - Female	NBR - standard	with gauges - standard	without outlet shut-off valve (standard)	Standard Configuration
	160 bar 2320 psi		EPDM	with HP inductive contact gauge	with outlet shut-off valve	with connected purge and safety valve
			FPM	with HP sliding contact gauge		
				with LP inductive contact gauge		
				with LP sliding contact gauge		
				with HP & LP sliding contact gauges		

SERIES CM 504 | SUPPLY BOARD

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 6.0
- Inlet pressure:
200 bar (2900 psi)
- Outlet pressure:
10/25/50 bar
145/363/725 psi

- ★ 1 duobloc
- ★ 3 inlets/1 outlet
- ★ Inlet/outlet pressure gauges
- ★ 1 safety relief valve
- ★ 1 purge outlet
- ★ O₂ application compatible (brass only)
- ★ Regulator with Balanced-Valve Technology

Special requirements on request

APPLICATIONS

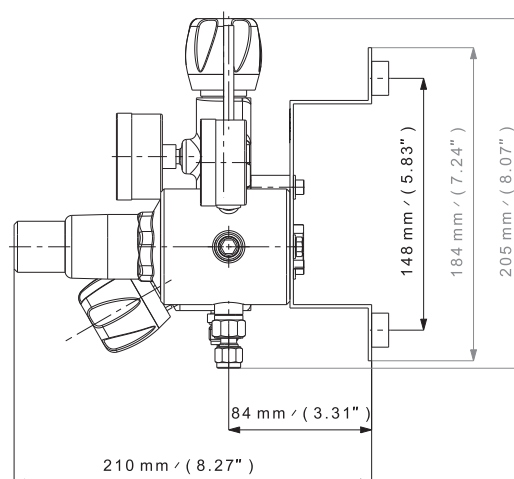
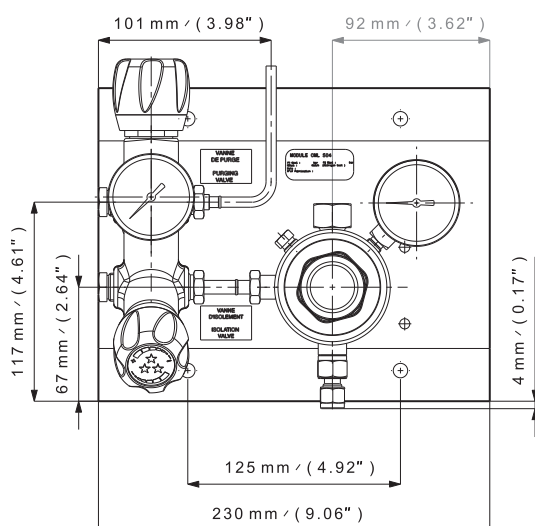
- Ideally suited for pure and corrosive gases for high purity applications dedicated to the supply of gas to analyzers and to the creation of controlled atmosphere in laboratories, control units, and for petrochemical applications where high flows are required.
- Used in combination with a switch over board for the regulation of the emergency source during maintenance on the principal source. This avoids installing some extension and reducing the amount of leaking points.

KEY FEATURES

- Possible to connect 2 gas cylinders and a gas for purging operation (up to 3 cylinders without any extension - without using the purge line).
- Ready to install with all components pre-mounted on a board.
- Best-in-class pressure stability with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure are minimized. Balanced-Valve Technology enables the delivery of a very stable outlet pressure and flow even with high flow line regulators.
- Increased regulator life and reduced ownership costs.
- Can be equipped with a collection tube on the safety relief valve and purge outlet.
- Can also be equipped with an outlet shut-off valve.
- The CM 504 can be connected to an alarm box using contact gauges.



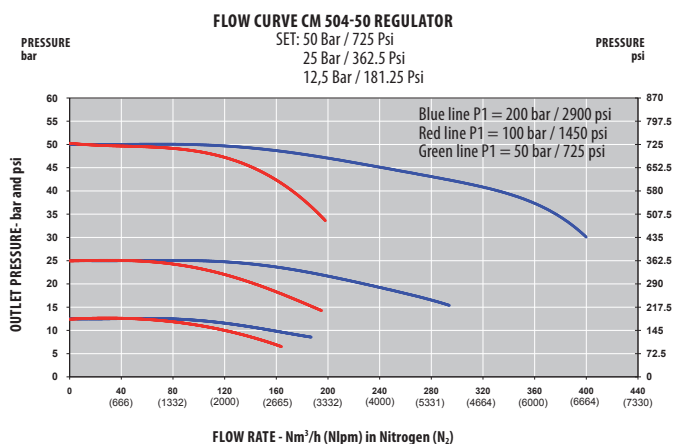
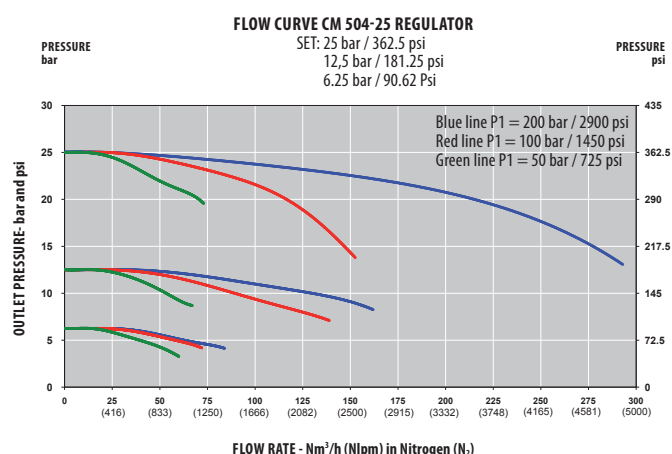
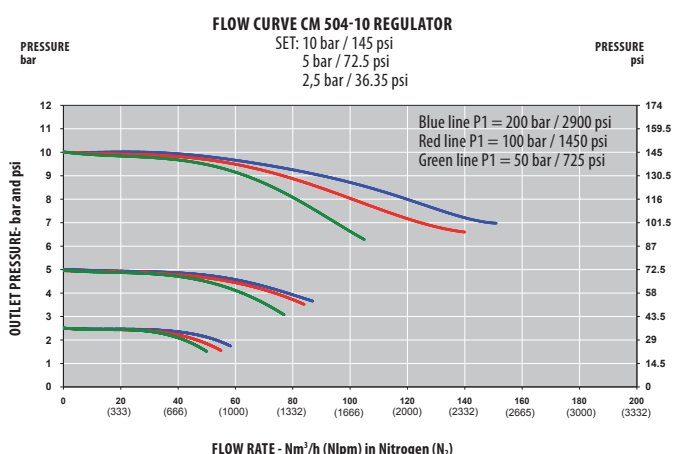
3 inlet ports



SPECIFICATIONS

Female ports	G 3/8 (inlet/outlet) or 1/4 NPT (inlet/outlet)	Weight	± 5,4 kg ± 11.8 lbs	Inlet pressure	200 bar 2900 psi
Seat seal	PCTFE	Leak rate	10 ⁻⁸ mbar ℓ/s He	Outlet pressure	10/25/50 bar 145/363/725 psi
O-ring	EPDM - standard NBR FPM	Temperature range	-20°C to + 60°C -4°F to + 140°F	Nominal Flow	50/50/100 Nm³/h (N₂)
Diaphragm	AlSi 304 (chrome plated version) Hastelloy® (stainless steel version)	Gauges	High and low pressure (M10 x 1 or 1/8 NPT)	Oxygen use	OK for brass with 200 bar inlet pressure

FLOW CURVES



PRODUCT CONFIGURATOR

Body Material		Outlet Pressure	End Connections	O-ring Material	Gauges	Fix or adjustable Outlet Pressure	Outlet Valve	Configuration
CML	504	10	G	EPDM	1	FX	NV	A
Chrome Plated Brass	CML	10 bar 145 psi	G 3/8 - Female	EPDM - standard	with gauges - standard	1 with fixed P2 (standard)	without outlet shut-off valve (standard)	standard configuration
Stainless steel	CMi	25 362.5 psi	NPT 1/4 - Female	NBR	with HP inductive contact gauge	2 with adjustable P2 (handwheel)	V with outlet shut-off valve	"mirror" version - duoblock on right side
		50 725 psi		FPM	with HP sliding contact gauge	3		with connected purge and safety valve
					with LP inductive contact gauge	4		"mirror" with connected purge and S.V.
					with LP sliding contact gauge	5		
					with HP & LP sliding contact gauges	6		

SERIES CEN | SWITCH OVER BOARD

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 5.5 (6.0 without the ball valve)
- Inlet pressure:
200 bar (2900 psi)
or 300 bar (4350 psi)
- Outlet pressure:
10/16/30/50 bar
145/232/435/725 psi
- Acetylene version:
P1 = 25 bar (362.5 psi)
P2 = 1 bar (14.5 psi)
- Propane version:
P1 = 25 bar (362.5 psi)
P2 = 4 bar (58 psi)

- ★ 2 duoblocs
- ★ 2 x 3 inlets/1 outlet
- ★ Inlet/outlet pressure gauges
- ★ 1 safety relief valve
- ★ 2 purge outlets
- ★ O₂ application compatible

Special requirements on request

APPLICATIONS

- Suitable for the high flow supply of non-corrosive industrial gases when high flow are required like for plasma TIG and MIG cutting and welding applications.

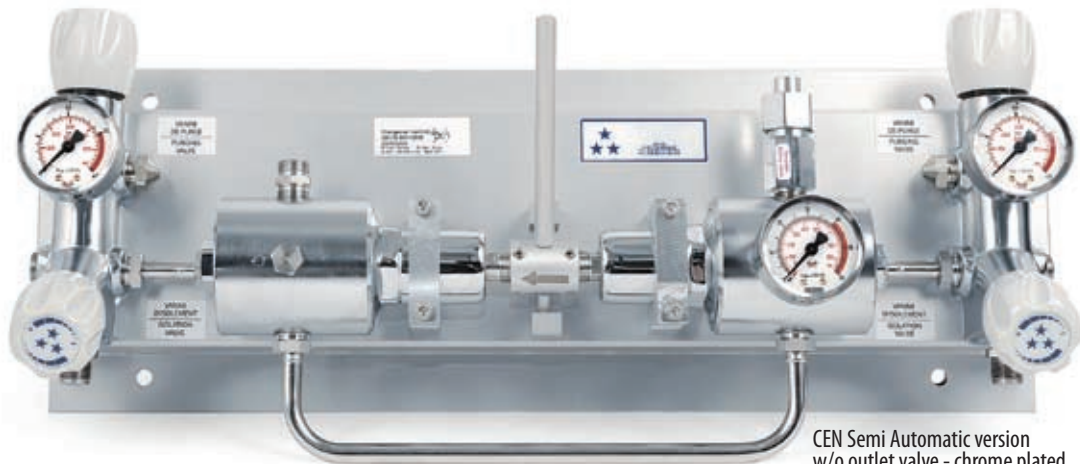
KEY FEATURES

- Possible to connect 4 gas cylinders without any extension and a gas for purging operation (up to 6 cylinders without any extension - without using the purge line).
- No risk that a source flows into the other one.
- Exists also in an AUTOMATIC version (with 10 and 16 bar outlet pressure). This automatic switch over board does not need to be reset to allow reversal of the cycle.
- Ready to install with all components pre-mounted on a board.
- Best-of-class pressure stability with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure are minimized. Balanced-Valve Technology enables the delivery of a very stable outlet pressure and flow.

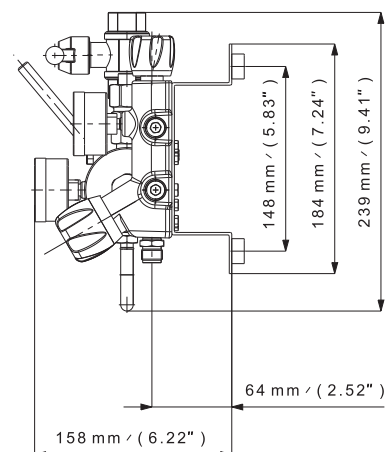
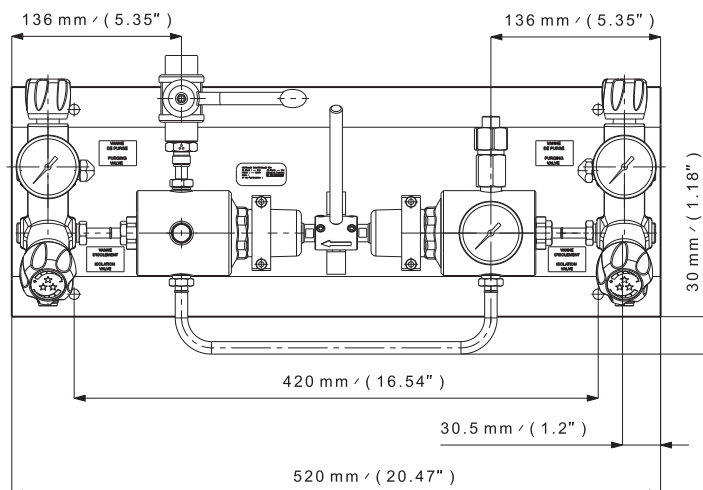
- Reduced seat effort increases life of the regulator and reduces the ownership cost.
- Non-whipping filter on bottom inlet improves safety of the operator during the cylinder replacement.
- Can be equipped with an outlet ¼ turn shut-off valve (Multi-turn valve with 30 bar or 50 bar version for oxygen use).
- Can also be equipped with a collection tube on the safety relief valve and purge outlet.
- Using contact gauges, the switch over board can also be equipped with an alarm box to indicate the source status.
- Special carbon dioxide CO₂ version available (inlet pressure 200 bar or 300 bar with maximal flow = 80m³/h)
- Special FDA compatible version available on demand
- Acetylene version available:
P1 = 25 bar/P2 = 1 bar/Q = 6,5 Nm³/h
- Used with acetylene, this product must be installed with a flash back arrestor complying with the standard EN 730 located downstream.
- Propane version also available:
P1 = 25 bar/P2 = 4 bar/Q = 10 Nm³/h



CEN Automatic version



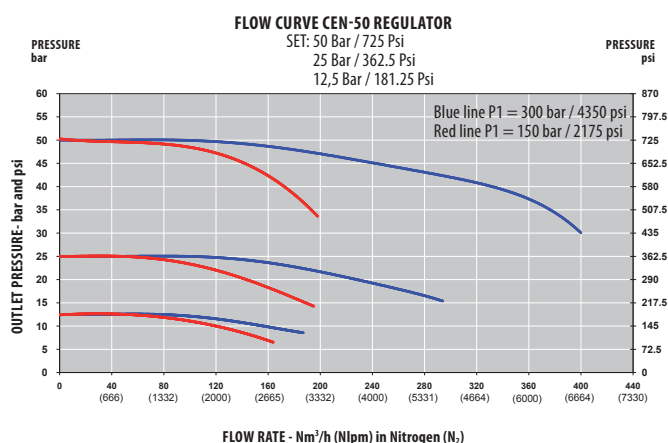
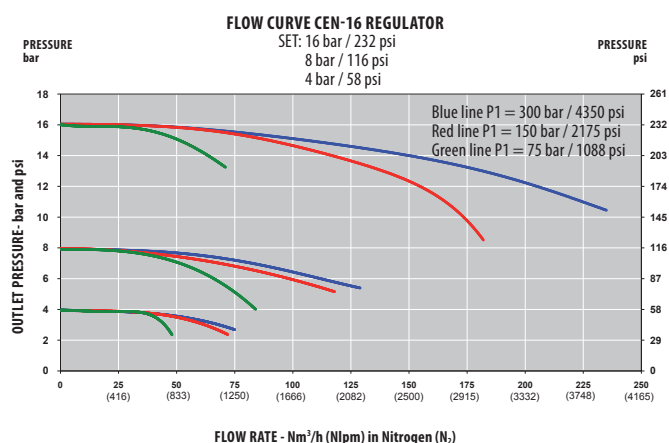
CEN Semi Automatic version
w/o outlet valve - chrome plated



SPECIFICATIONS

Female ports	G 3/8 (inlet) - G 1/2 (outlet) or 3/8 NPT (inlet) - G 1/2 (outlet)	Leak rate	w/outlet valve: 1.10 ⁻⁴ mbar ℓ/s He w/o outlet valve: 1.10 ⁻⁸ mbar ℓ/s He	Inlet pressure	200 bar / 300 bar 2900 psi / 4350 psi AD and PR4: 25 bar / 362.5 psi
Seat seal	PCTFE	Temperature range	-20°C to + 60°C -4°F to + 140°F	Outlet pressure	10/16/30/50 bar 145/232/435/725 psi AD: 1 bar (14.5 psi) PR4: 4 bar (58 psi)
O-ring	EPDM - standard NBR FPM	Gauges	High and low pressure (M10 x 1 or G 1/4)	Nominal Flow 200 bar version	70/110/150/180 Nm ³ /h (N ₂)
Diaphragm	AISI 304 or Hastelloy®			Nominal Flow 300 bar version	50/70/100/130 Nm ³ /h (N ₂)
Weight	± 13,8 kg ± 27.0 lbs			Nominal Flow AD and PR4	AD: 6,5 Nm ³ /h PR4: 10 Nm ³ /h
				Oxygen use	OK with inlet pressure 200 and 300 bar

FLOW CURVES



PRODUCT CONFIGURATOR

	Inlet Pressure	Version type	Outlet Pressure	Body Material	End Connections	O-ring Material	Gauges	Outlet Valve	Configurations
CEN	300	AUTO	16	L	G	EPDM	1	V	A
	200 bar 2900 psi	200 Automatic	10 bar 145 psi	10 Raw Brass	LB In: G 3/8 Out: G 1/2 - Female	G EPDM - standard	with gauges - standard	1 without outlet shut-off valve (standard)	NV Standard configuration
	300 bar 4350 psi	300 Semi-automatic	16 bar 232 psi	16 Chrome Plated Brass	L In: NPT 3/8 Out: G 1/2 - Female	N NBR	with HP inductive contact gauge	2 with outlet shut-off valve	V with connected purge
			30 bar 435 psi	30		FPM	with HP sliding contact gauge	3	
			30 OX bar (435 psi) oxygen use	30 OX			with LP inductive contact gauge	4	
			50 bar 725 psi	50			with LP sliding contact gauge	5	
			50 OX bar (725 psi) oxygen use	50 OX			with HP & LP sliding contact gauges	6	
			Acetylene special version (P2 = 1 bar)	AD					
			Propane special version (P2 = 4 bar)	PR4					

SERIES TD 100 | SWITCH OVER BOARD

- Diaphragm single stage
- Purity up to 6.0
- Inlet pressure:
200 bar (2900 psi)
- Outlet pressure:
10/25/50 bar
145/363/725 psi
- NH₃ version:
P1 = 8 bar (116 psi)
P2 = 3 bar (43.5 psi)

- ★ 2 duoblocs
- ★ 2 x 3 inlets/1 outlet
- ★ 2 inlets/1 outlet pressure gauges
- ★ 1 safety relief valve
- ★ 2 purge outlets
- ★ Semi-automatic and Manual Version available
- ★ Regulation done by 2 x S 220 regulators
- ★ Only in stainless steel

Special requirements on request

APPLICATIONS

- Ideally suited for corrosive gases and high purity applications for low flow applications.
- Dedicated to the supply of gas to analyzers and to the creation of controlled atmosphere in laboratories, control units.

KEY FEATURES

- Possible to manage 4 gas cylinders without any extension and a gas for purging operation (up to 6 cylinders without any extension - without using the purge line).
- No risk that a source flows into the other one.
- Exists in Manual and Semi-automatic versions.

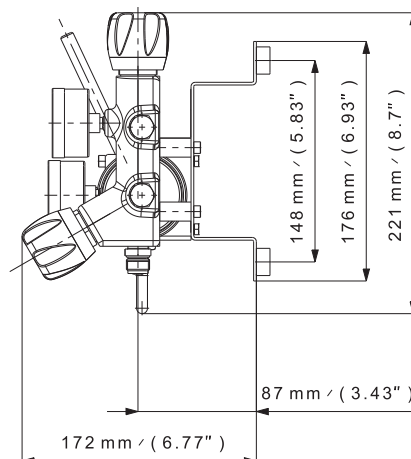
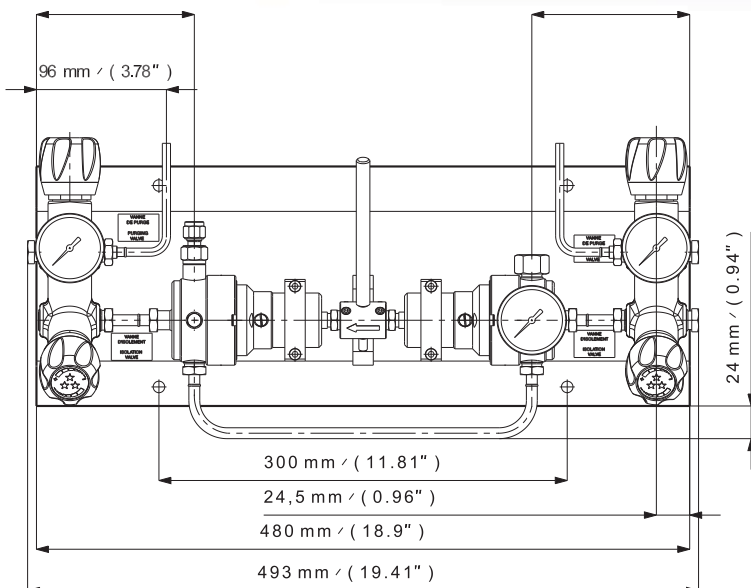
- Ready to install with all components are mounted on a board.
- Can be equipped with a collectable tube on the safety relief valve and purge outlet.
- Can also be equipped with an outlet shut-off valve.
- Using contact gauges, the switch over board can also be equipped with an alarm box to indicate the source status.
- NH₃ version available:
P1 = 8 bar/P2 = 3 bar/Q = 5 Nm³/h.



TDI 103 Manual version



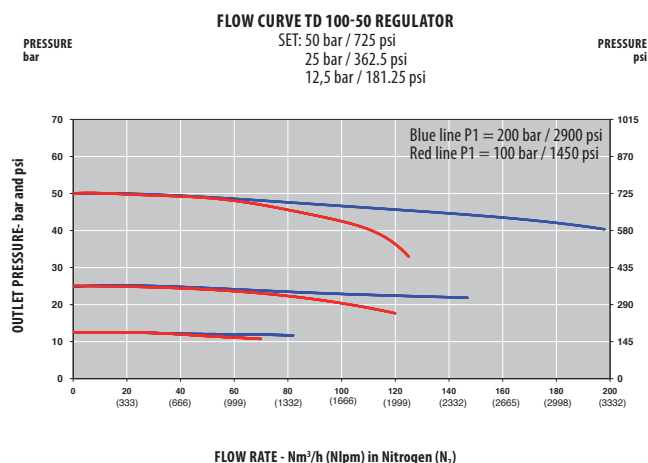
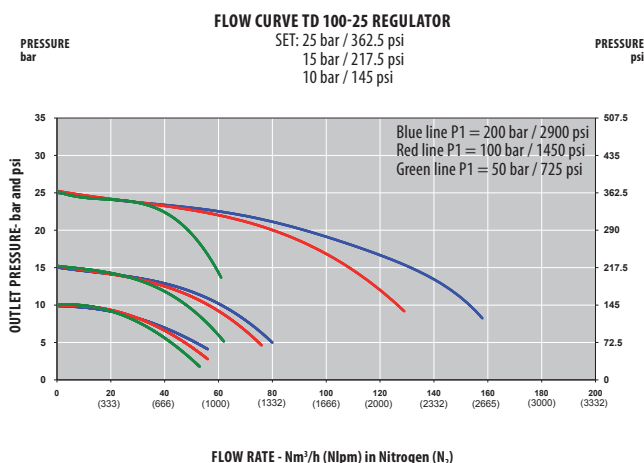
TDI 102 Semi-automatic version



SPECIFICATIONS

Female ports	G 3/8 (inlet/outlet) or 1/4 NPT (inlet/outlet)	Weight	± 15,0 kg ± 33.0 lbs	Inlet pressure	200 bar (2900 psi) NH ₃ : 8 bar (116 psi)
Seat seal	PCTFE	Leak rate	10 ⁻⁸ mbar ℓ/s He	Outlet pressure	10/25/50 bar 145/363/725 psi NH ₃ : 3 bar (43.5 psi)
O-ring	EPDM - standard NBR FPM	Temperature range	-20°C to + 60°C -4°F to + 140°F	Nominal Flow	10/10/50 Nm ³ /h (N ₂) NH ₃ : 5 Nm ³ /h (NH ₃)
Diaphragm	Hastelloy®	Gauges	High and low pressure (M10 x 1 or 1/8 NPT)	Oxygen use	No

FLOW CURVES



PRODUCT CONFIGURATOR

Body Material	Version Type	Outlet Pressure	End Connections	O-ring Material	Gauges	Outlet Valve	Configuration
TDI	102	10	G	EPDM	1	V	A
Stainless steel	Semi-automatic manual (10 bar version)	102 10 bar 145 psi	10 G 3/8 - Female	G EPDM - standard	with gauges - standard	1 without outlet shut- off valve (standard)	NV Standard configuration
		103 25 bar 362.5 psi	25 NPT 1/4 - Female	N NBR	with HP inductive contact gauge	2 with outlet shut-off valve	V with connected purge and safety valve
		50 bar 725 psi	50	FPM	with HP sliding contact gauge	3	
		Ammonia special version (P2 = 3 bar)	NH3		with LP inductive contact gauge	4	
					with LP sliding contact gauge	5	
					with HP & LP sliding contact gauges	6	

SERIES TD 102 UC | ULTRA HIGH PURITY SWITCH OVER BOARD

- Diaphragm single stage
- UHP applications
- Inlet pressure:
200 bar (2900 psi)
- Outlet pressure:
10 / 25 / 50 bar
145 / 363 / 725 psi

- ★ 2 straights duoblocs Ultra Clean
- ★ 2 x 2 inlets / 1 outlet
- ★ 1 outlet face seal ¼ turn shut-off valve
- ★ 2 inlets / 1 outlet pressure gauges
- ★ 2 purge outlets
- ★ 1 burst disc
- ★ Semi-automatic Version
- ★ Regulation done by 2 x S 220 UHP regulators
- ★ Only in stainless steel

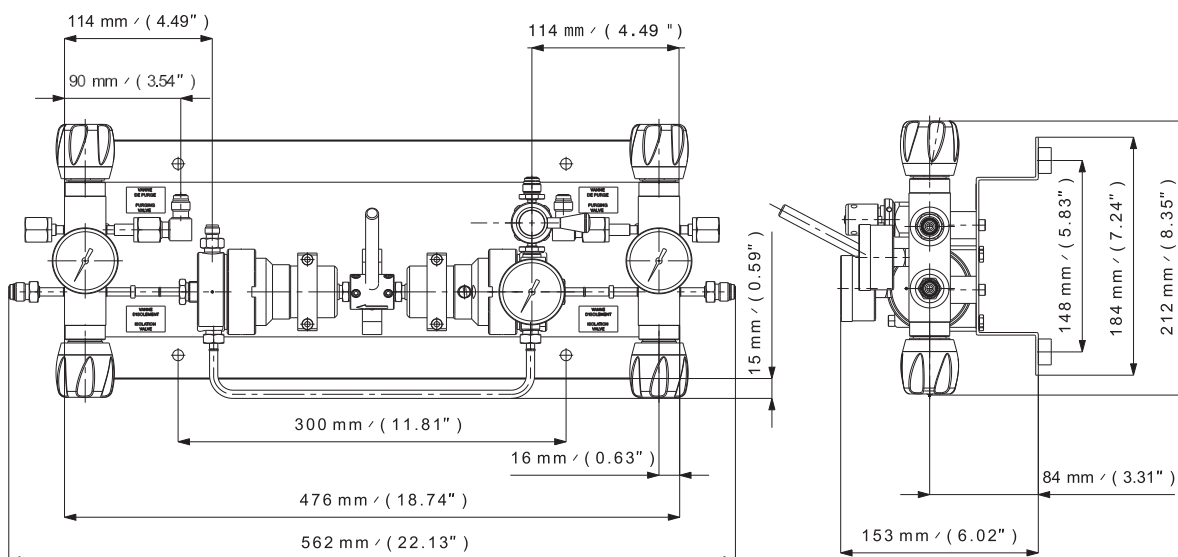
Special requirements on request

APPLICATIONS

- This switch over board is ideally suited for pure and corrosive gases for ultra high purity applications
- Dedicated to the supply of gas to analyzers and to the creation of controlled atmosphere in laboratories, control units and semi conductor plants

KEY FEATURES

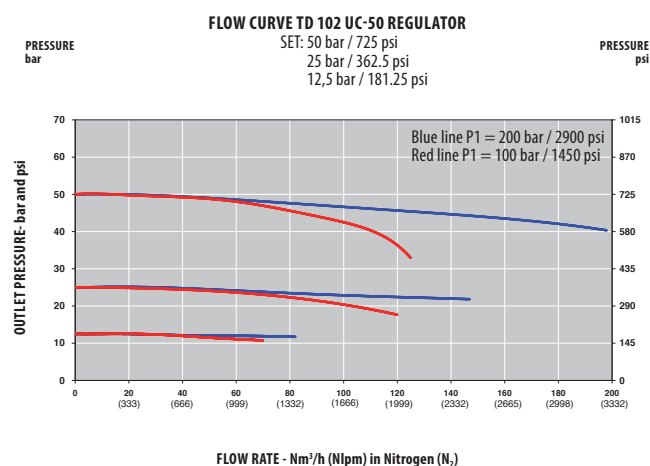
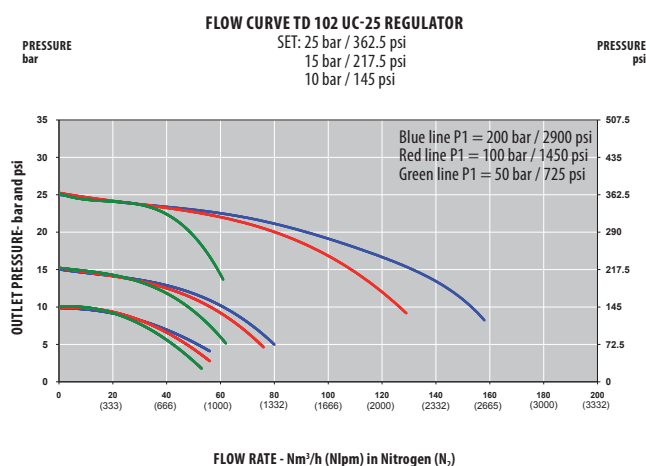
- Semi-automatic.
- Possible to manage 2 gas cylinders without any extension and a gas for purging operation.
- No risk that a source flows into the other one.
- Ready to install with all components pre-mounted on a board.
- Can be equipped with a collection tube on the safety relief valve and purge outlet.
- Using contact gauges, the switch over board can also be equipped with an alarm box to indicate the source status.



SPECIFICATIONS

Female ports	face seal ¼ (inlet/outlet)	Weight	± 15,0 kg ± 33.0 lbs	Inlet pressure	200 bar 2900 psi
Surface finish	< 0.4 µm Ra (15 µin Ra)	Leak rate	10 ⁻⁹ mbar ℓ/s He	Outlet pressure	10/25/50 bar 145/363/725 psi
Seat seal	PCTFE	Temperature range	-20°C to + 60°C -4°F to + 140°F	Nominal Flow	10/10/10 Nm³/h (N₂)
Diaphragm	Hastelloy®	Gauges	High and low pressure (¼ face seal)	Oxygen use	No

FLOW CURVES



PRODUCT CONFIGURATOR

Body Material			Outlet Pressure		Gauges	
TDI	102	UC	10	1		
Stainless steel	TDI		10 bar 145 psi	10	with gauges - standard	1
			25 bar 362.5 psi	25	with HP inductive contact gauge	2
			50 bar 725 psi	50	with HP sliding contact gauge	3
					with LP inductive contact gauge	4
					with LP sliding contact gauge	5
					with HP & LP sliding contact gauges	6

SERIES TD 200 | SWITCH OVER BOARD

- Diaphragm single stage
- Purity up to 6.0
- Inlet pressure:
200 bar (2900 psi)
or 300 bar (4350 psi)
- Outlet pressure:
10 bar (145 psi)
or 16 bar (232 psi)

- ★ 2 duoblocs
- ★ 2 x 3 inlets/1 outlet
- ★ 2 inlets/1 outlet pressure gauges
- ★ 1 safety relief valve
- ★ 2 purge outlets
- ★ Manual, semi-automatic and automatic version available.
- ★ Regulation done by 2 x SL / SI 215
- ★ O₂ application compatible (brass only 200 bar version)

Special requirements on request

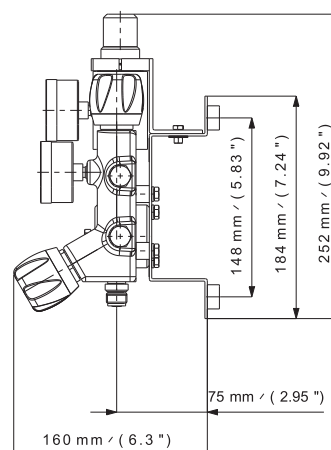
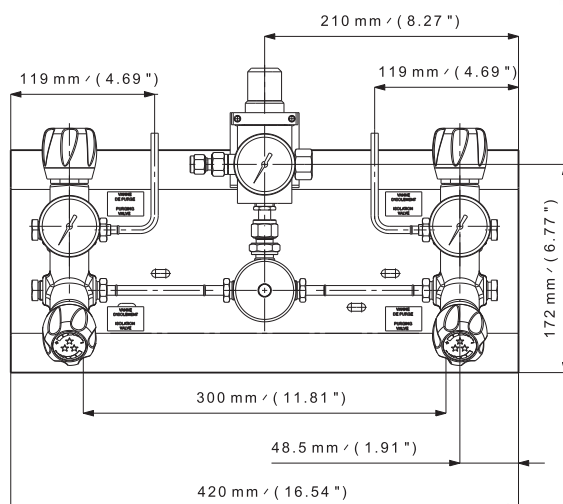
APPLICATIONS

- Ideally suited to insure gas supply from many high-pressure sources of high purity non-corrosive gases with low flow
- Dedicated to the supply of gas to analyzers and to the creation of controlled atmosphere in laboratories, control units, and for petrochemical applications.

KEY FEATURES

- Possible to manage 4 gas cylinders without any extension and a gas for purging operation (up to 6 cylinders without any extension - without using the purge line).
- No risk that a source flows into the other one.
- Exists in a MANUAL, SEMI-AUTOMATIC and AUTOMATIC version.
- The automatic switch over board does not need to be reset to allow reversal of the cycle.
- Ready to install due with all components pre-mounted on a board.
- Can be equipped with a collection tube on the safety relief valve and purge outlet.
- Can be equipped with an outlet shut-off valve.
- Using contact gauges, the switch over board can also be equipped with an alarm box to indicate the source status.

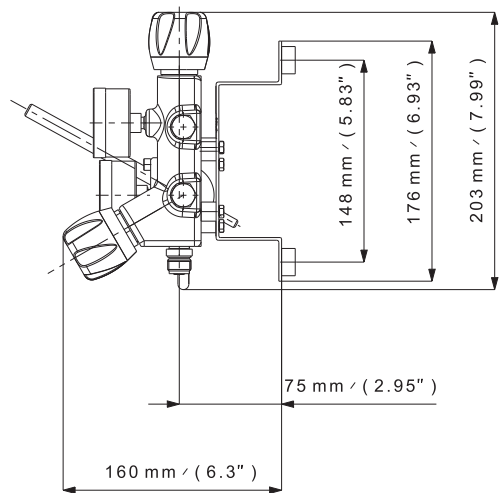
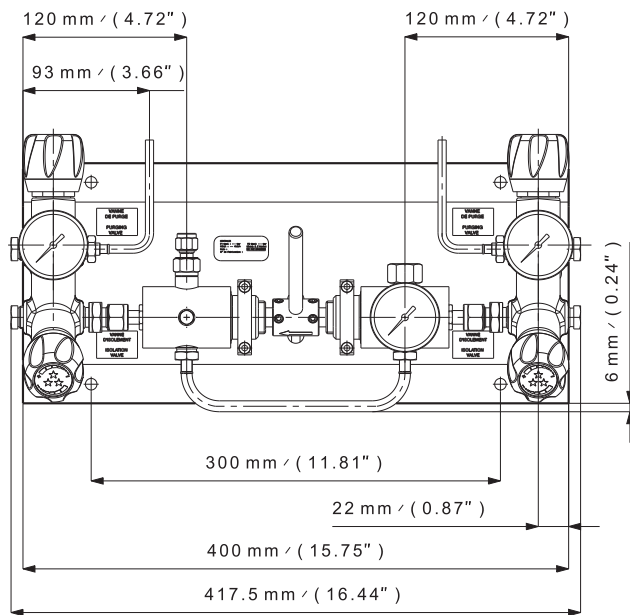
MANUAL VERSION



SEMI-AUTOMATIC VERSION

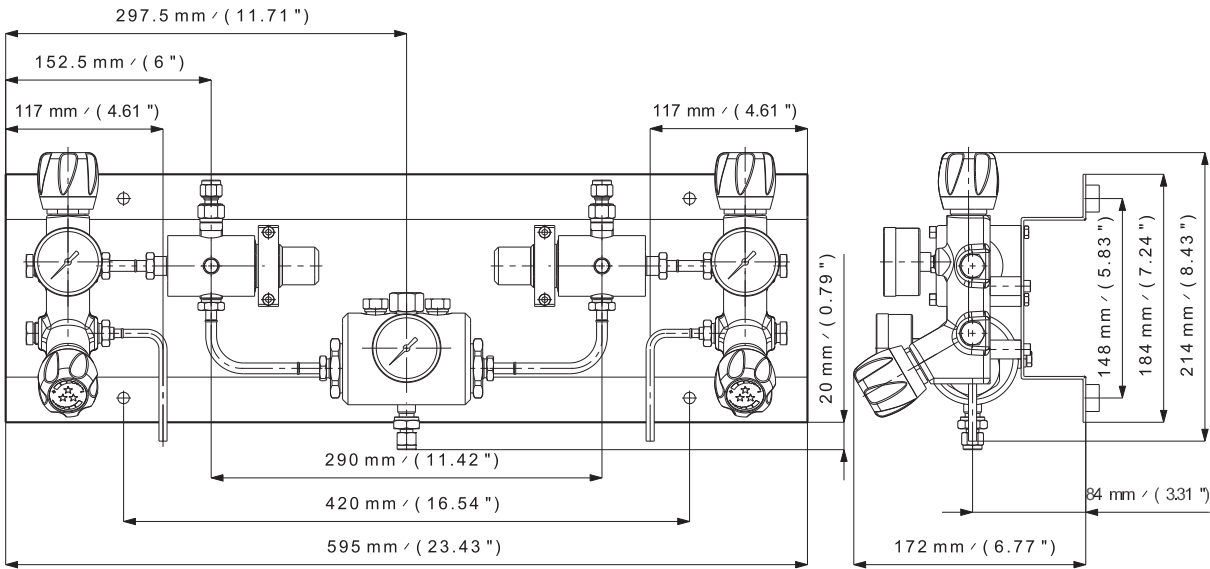


3 inlet ports



SERIES TD 200 | SWITCH OVER BOARD (cont'd)

AUTOMATIC VERSION

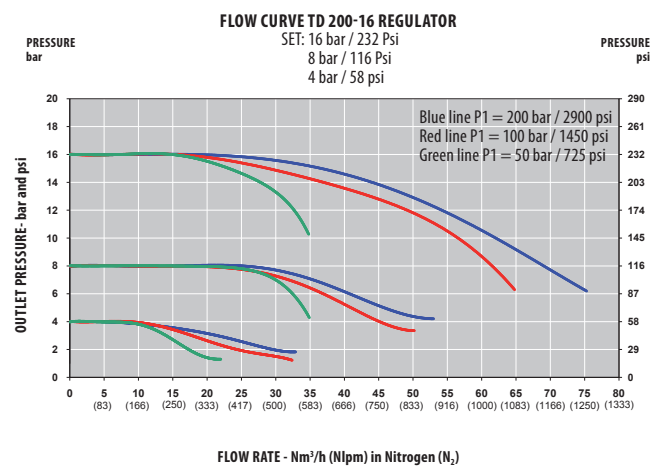
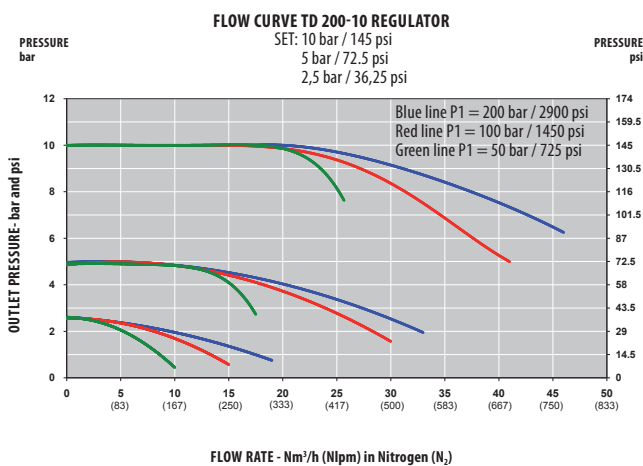


SPECIFICATIONS

Female ports	G 3/8 (inlet/outlet) or 1/4 NPT (inlet/outlet)	Weight	± 13 kg ± 29.0 lbs	Inlet pressure	200 bar / 300* bar 2900 psi / 4350 psi
Seat seal	PCTFE	Leak rate	10 ⁻⁸ mbar ℓ/s He	Outlet pressure	10/16 bar 145/232 psi
O-ring	EPDM - standard NBR FPM	Temperature range	-20°C to + 60°C -4°F to + 140°F	Nominal Flow	10/10 Nm ³ /h (N ₂)
Diaphragm	AISI 304 Hastelloy®	Gauges	High and low pressure (M10 x 1 or 1/8 NPT)	Oxygen use	Brass only with inlet pressure 200 bar

*Only in chrome plated version

FLOW CURVES



PRODUCT CONFIGURATOR

	Body Material		Inlet Pressure and Version Type		Outlet Pressure		End Connections		O-ring Material	Gauges		Outlet Valve		Configuration	
TD	L		202		10		G		EPDM	1		NV		A	
	Chrome Plated Brass	L	200 bar (2900 psi) automatic - 10 bar version	201	10 bar 145 psi	10	G 3/8 - Female	G	EPDM - standard	with gauges - standard	1	without outlet shut-off valve (standard)	NV	Standard configuration	A
	Stainless steel	I	200 bar (2900 psi) semi-automatic	202	16 bar 232 psi	16	NPT 1/4 - Female	N	NBR	with HP inductive contact gauges	2	with outlet shut-off valve	V	with connected purge and safety valve	CL
			200 bar (2900 psi) manual - 10 bar version	203					FPM	with HP sliding contact gauges	3				
			300 bar (4350 psi) semi-automatic	302						with LP inductive contact gauge	4				
										with LP sliding contact gauge	5				
										with HP & LP sliding contact gauges	6				

SERIES TD 500 | SWITCH OVER BOARD

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 6.0
- Inlet pressure:
200 bar (2900 psi)
- Outlet pressure:
10/25/50 bar
145/363/725 psi

- ★ 2 duoblocs
- ★ 2 x 3 inlets/1 outlet
- ★ Inlet/outlet pressure gauges
- ★ 1 safety relief valve
- ★ 2 purge outlets
- ★ O₂ application compatible
(brass only 200 bar version)
- ★ Manual, semi-automatic and
automatic version available

Special requirements on request

APPLICATIONS

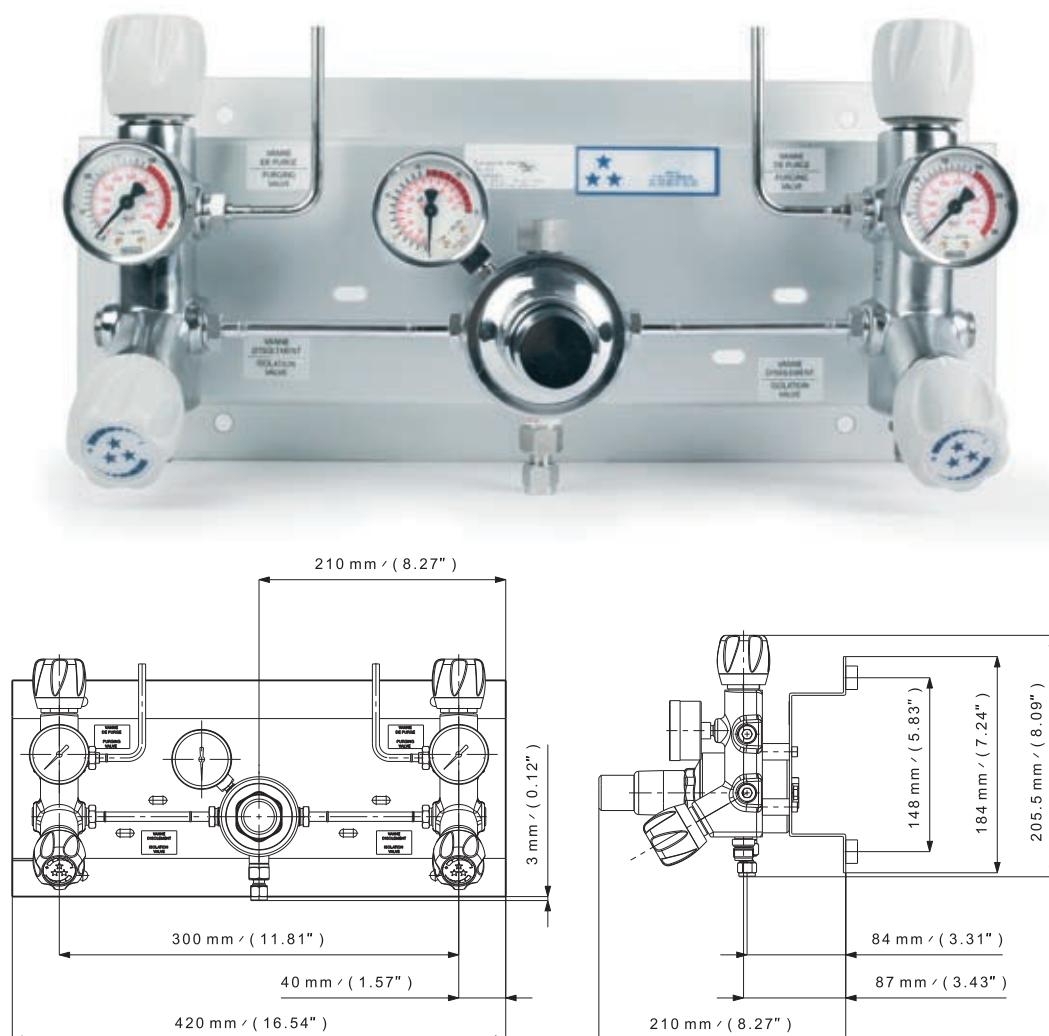
- Ideally suited to insure gas supply from many high-pressure sources of high purity non-corrosive gases with high flow
- Dedicated to supply of gas to analyzers and to create a controlled atmosphere in laboratories, control units, and for petrochemical applications.

KEY FEATURES

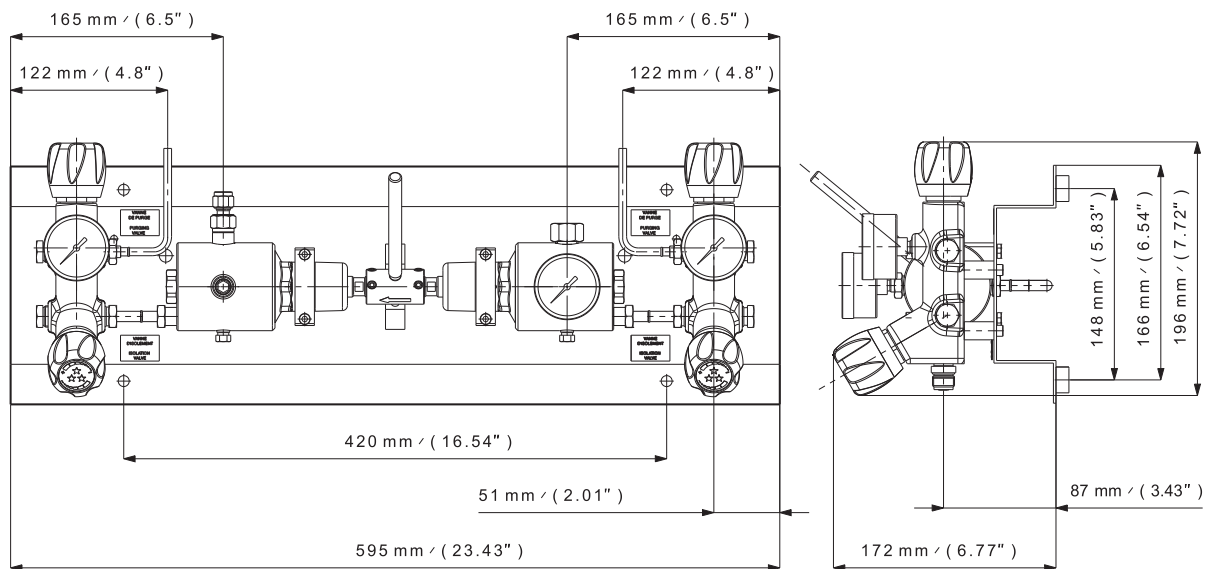
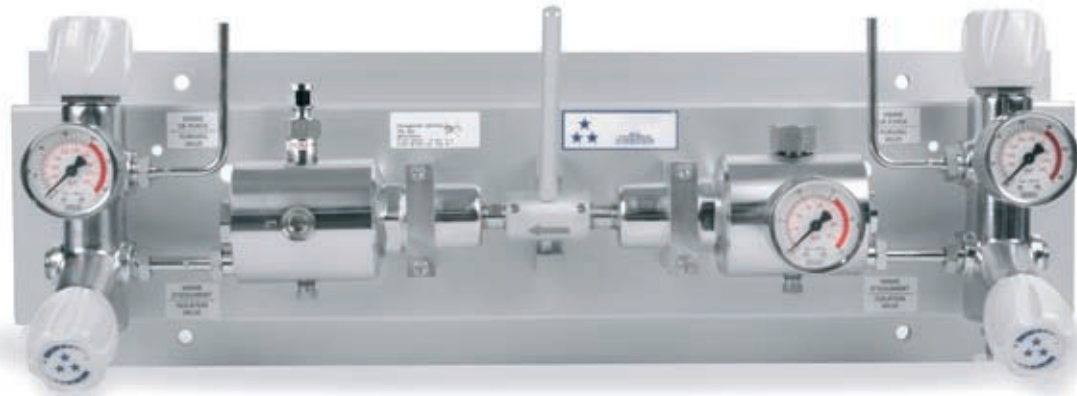
- Possible to manage 4 gas cylinders without any extension and a gas for purging operation (up to 6 cylinders without any extension - without using the purge line).
- No risk that a source flows into the other one.
- Ready to install with all components pre-mounted on a board.
- Exists in an MANUAL, SEMI-AUTOMATIC and AUTOMATIC version.

- The automatic switch over board does not need to be reset to allow reversal of the cycle.
- Best-in-class pressure stability with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure are minimized. The Balanced-Valve Technology enables the delivery of a very stable outlet pressure and flow.
- The BV Technology reduces the efforts on the seat to increase life of the regulator and reduce the ownership cost.
- Can be equipped with a collection tube on the safety relief valve and purge outlet.
- Can be equipped with an outlet shut-off valve.
- Using contact gauges, the switch over board can also be equipped with an alarm box to indicate the source status.

MANUAL VERSION



SEMI-AUTOMATIC VERSION

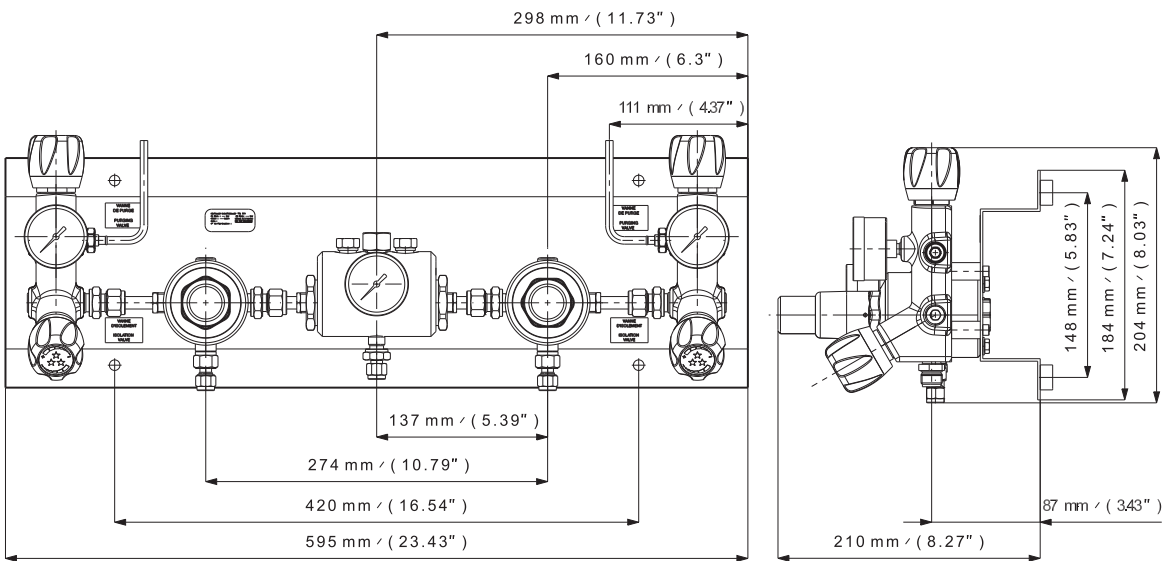


SERIES TD 500 | SWITCH OVER BOARD (cont'd)

AUTOMATIC VERSION



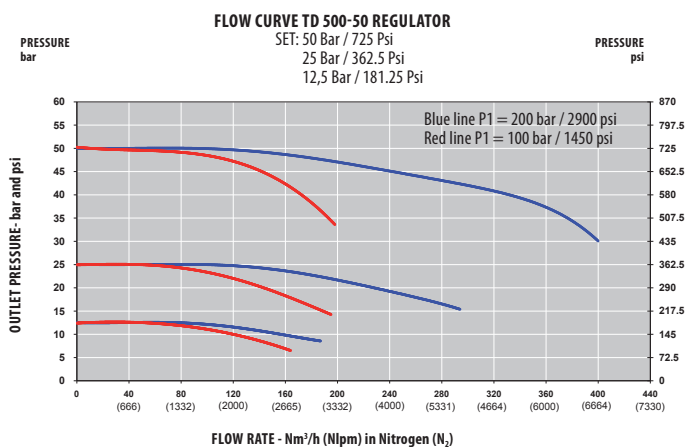
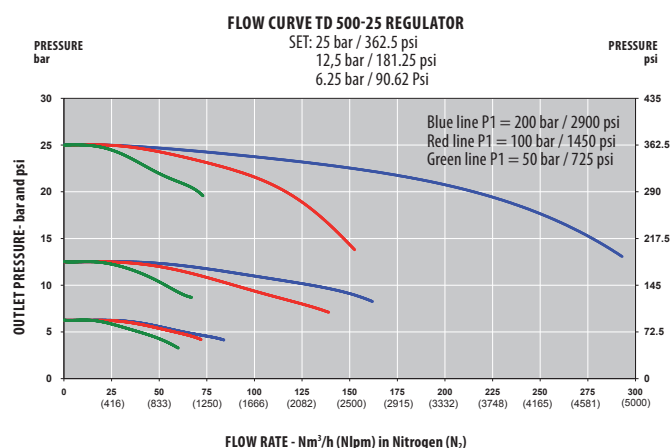
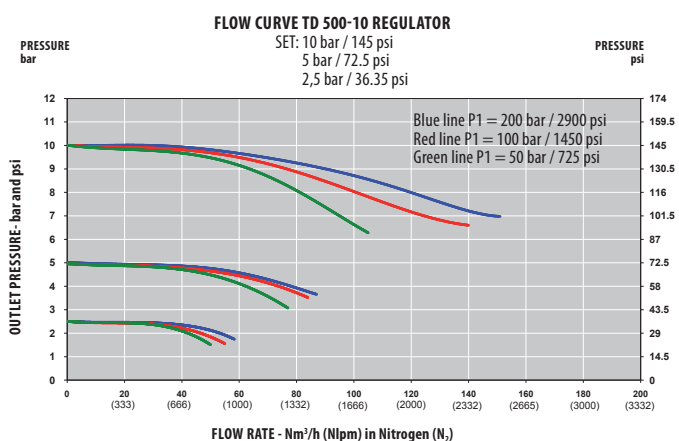
3 inlet ports



SPECIFICATIONS

Female ports	G 3/8 (inlet/outlet) or 1/4 NPT (inlet/outlet)	Weight	± 13 kg ± 29.0 lbs	Inlet pressure	200 bar 2900 psi
Seat seal	PCTFE	Leak rate	10 ⁻⁸ mbar ℓ/s He	Outlet pressure	10/25/50 bar 145/363/725 psi
O-ring	EPDM - standard NBR FPM	Temperature range	-20°C to + 60°C -4°F to + 140°F	Nominal Flow	50/50/100 Nm³/h (N₂)
Diaphragm	AISI 304 Hastelloy®	Gauges	High and low pressure (M10 x 1 or 1/8 NPT)	Oxygen use	Brass only with inlet pressure 200 bar

FLOW CURVES



PRODUCT CONFIGURATOR

	Body Material		Inlet Pressure and Version Type		Outlet Pressure		End Connections		O-ring Material	Gauges		Outlet Valve		Configuration	
TD	L		502		10		G		EPDM	1		NV		A	
	Chrome Plated Brass	L	200 bar (2900 psi) automatic - 10 bar version	501	10 bar 145 psi	10	G 3/8 - Female	G	EPDM - standard	with gauges - standard	1	without outlet shut-off valve (standard)	NV	Standard configuration	A
	Stainless steel	I	200 bar (2900 psi) semi-automatic	502	25 bar 362.5 psi	25	NPT 1/4 - Female	N	NBR	with HP inductive contact gauges	2	with outlet shut-off valve	V	with connected purge and safety valve	CL
			200 bar (2900 psi) manual - 10 bar version	503	50 bar 725 psi	50			FPM	with HP sliding contact gauges	3				
										with LP inductive contact gauge	4				
										with LP sliding contact gauge	5				
										with HP & LP sliding contact gauges	6				

SERIES TD 502 COMPACT | SWITCH OVER BOARD

- Diaphragm dual stage
- Balanced-Valve Technology
- Purity up to 5.0
- Inlet Pressure:
300 bar (4350 psi)
- Outlet Pressure:
8/15/40 bar
(116/218/580 psi)
- Acetylene version (AD - C₂H₂):
P1 = 20 bar (290 psi)
P2 = 0,8 bar (12 psi)

- ★ 2 x 1 inlet/1 outlet
- ★ Inlet/outlet pressure gauges
- ★ 1 safety relief valve
- ★ O₂ application compatible
- ★ Semi-automatic
- ★ 2 stages
- ★ 2 x SL 800 regulators
(1st stage) + 1 x DC 50
regulator (2nd stage)
- ★ Regulators with Balanced-
Valve Technology
- ★ High flow

Special requirements on request

APPLICATIONS

- Ideally suited to insure gas supply from many high-pressure sources of high purity non-corrosive gases with high flow
- Designed for applications which need a high flow rate and a very stable and constant outlet pressure.

KEY FEATURES

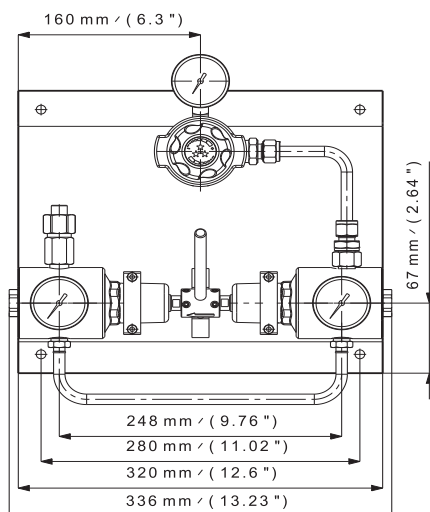
- No risk that a source flows into the other one.
- Ready to install with all components pre-mounted on a board.
- Best-in-class pressure stability with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure are minimized. Balanced-Valve

Technology enables the delivery of a very stable outlet pressure and flow.

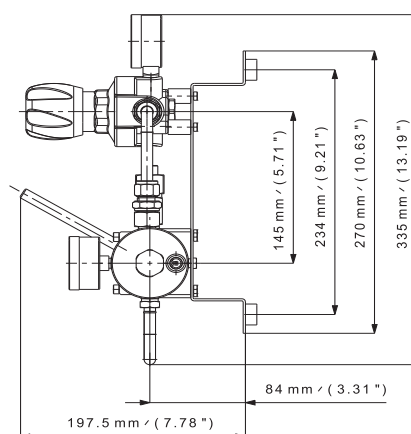
- Reduces the efforts on the seat to increase life of the regulator and reduces the ownership cost.
- Can be equipped with an outlet shut-off valve.
- Adjustable version available (handwheel on the 2nd stage DC 50 regulator).
- Using contact gauges, the switch over board can also be equipped with an alarm box to indicate the source status.
- Acetylene version available:
P1 = 20 bar / P2 = 0,8 bar / Q = 10 Nm³/h
- For use with acetylene this product must be installed with a flash back arrestor complying with the standard EN 730 located downstream.



Version without handwheel on the DC50 (STD version)



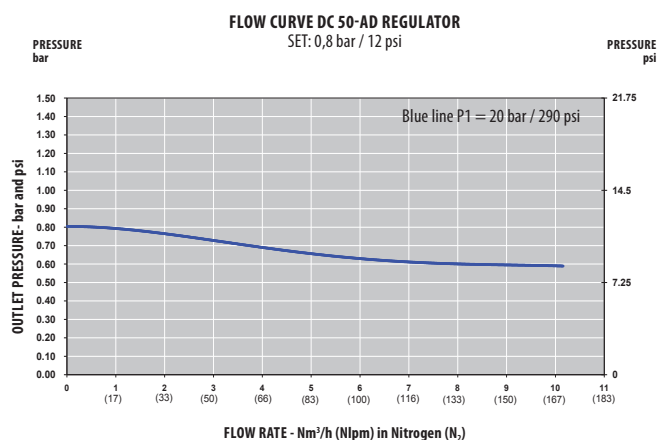
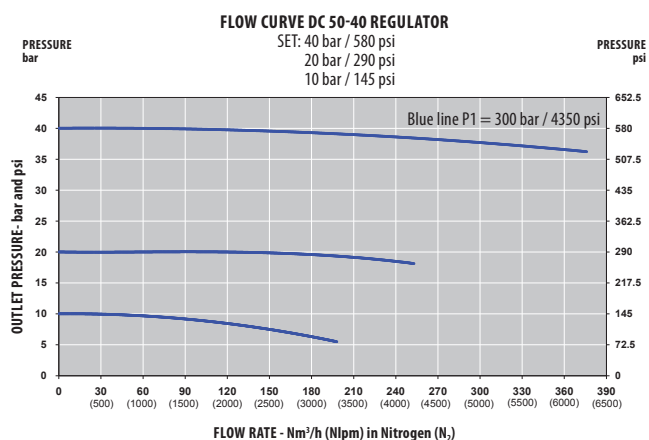
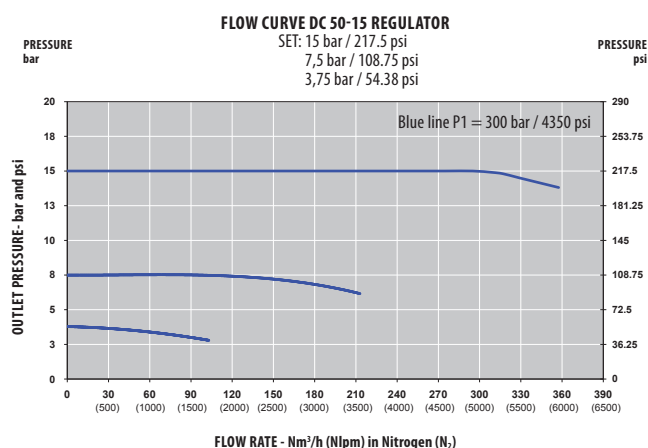
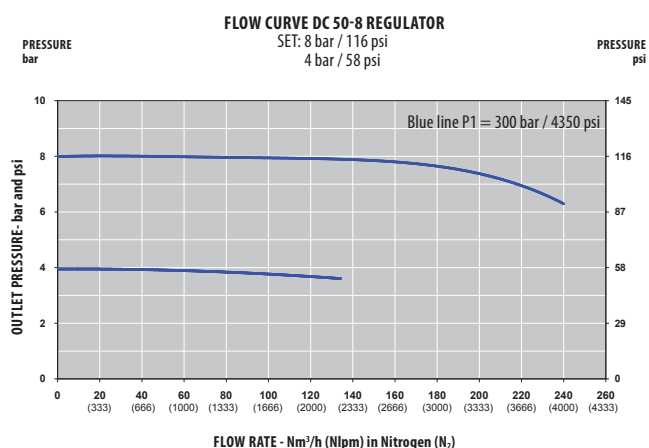
Version with handwheel on the DC50 (HW version)



SPECIFICATIONS

Female ports	G 3/8 (inlet) - G 1/2 (outlet) or 1/4 NPT (inlet) - 1/2 NPT (outlet)	Weight	± 13 kg ± 29.0 lbs	Inlet pressure	300 bar (4350 psi) AD: 20 bar (290 psi)
Seat seal	PCTFE/EPDM	Leak rate	10 ⁻³ mbar ℓ/s He	Outlet pressure	8/15/40 bar - 0,8 bar (AD) 116/218/580 psi - 12 psi (AD)
O-ring	EPDM - standard NBR FPM	Temperature range	-20°C to + 60°C -4°F to + 140°F	Nominal Flow	150/300/300 Nm ³ /h (N ₂) AD: 10 Nm ³ /h (C ₂ H ₂)
Diaphragm	Hastelloy® EPDM (DC50 2 nd stage)	Gauges	High and low pressure 1 st stage: M10 x 1 or 1/8 NPT 2 nd stage: G 1/4 or 1/8 NPT	Oxygen use	OK

FLOW CURVES



PRODUCT CONFIGURATOR

Body Material			Outlet Pressure		End Connections		O-ring Material	Gauges		Second Stage Regulations		Adjustable Outlet Pressure	
TD	L	502 COMPACT	8	8	G	G	EPDM	1	1	DC	DC	STD	STD
Chrome Plated Brass	L		8 bar 116 psi	8	In: G 3/8 Out: G 1/2 - Female	G	EPDM - standard	with gauges - standard	1	with DC50	DC	Without handwheel on the DC 50	STD
			15 bar 218 psi	15	In: NPT 1/4 Out: NPT 1/2 - Female	N	NBR	with HP inductive contact gauges	2	without DC 50	NDC	With handwheel on the DC 50	HW
			40 bar 580 psi	40			FPM	with HP sliding contact gauges	3				
			Acetylene special version (P2 = 0,8 bar)	AD				with LP inductive contact gauge	4				
								with LP sliding contact gauge	5				
								with HP & LP sliding contact gauges	6				

BA 10 / BA 11 | ALARM BOXES

- Visual and acoustic alarm for automatic detection of faulty outlet pressure.
- The alarm boxes can be used in explosive atmosphere ('Ex' special version).

ALARM BOXES

- ★ 3 contacts (BA 10)
- ★ 10 contacts (BA 11)
- ★ detection of faulty P2

Special requirements on request

KEY FEATURES

- Detects the moment when the cylinder is empty when connected to a switch over board or a supply board. It also indicates that the equipment works correctly.
- Visual and acoustic display
- Repetition of the alarm by temporisation
- Can be use with all kind of gauges
- Connectable to remote alarms
- Delivered without power supply cable
- The BA 11 alarm box is delivered with a yellow front panel
- CE marked (CEM directive)
- Compact ABS housing

OPTIONS

- Special explosive atmosphere version (BA 10 Ex - BA 11 Ex)

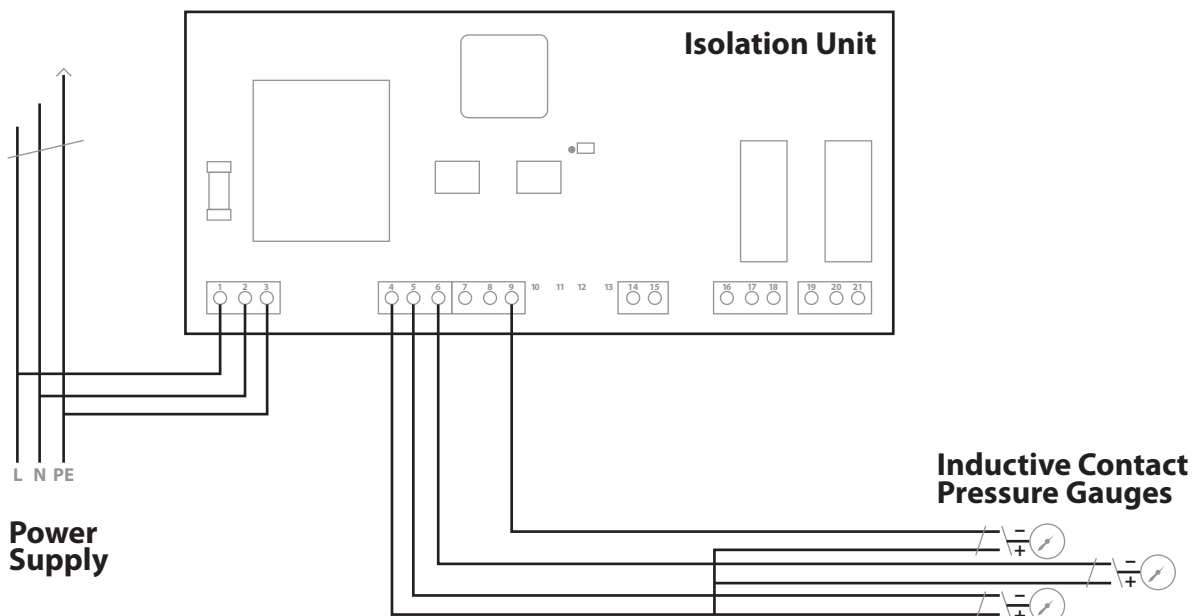
BA 10 (3 CONTACTS)



BA 11 (10 CONTACTS)



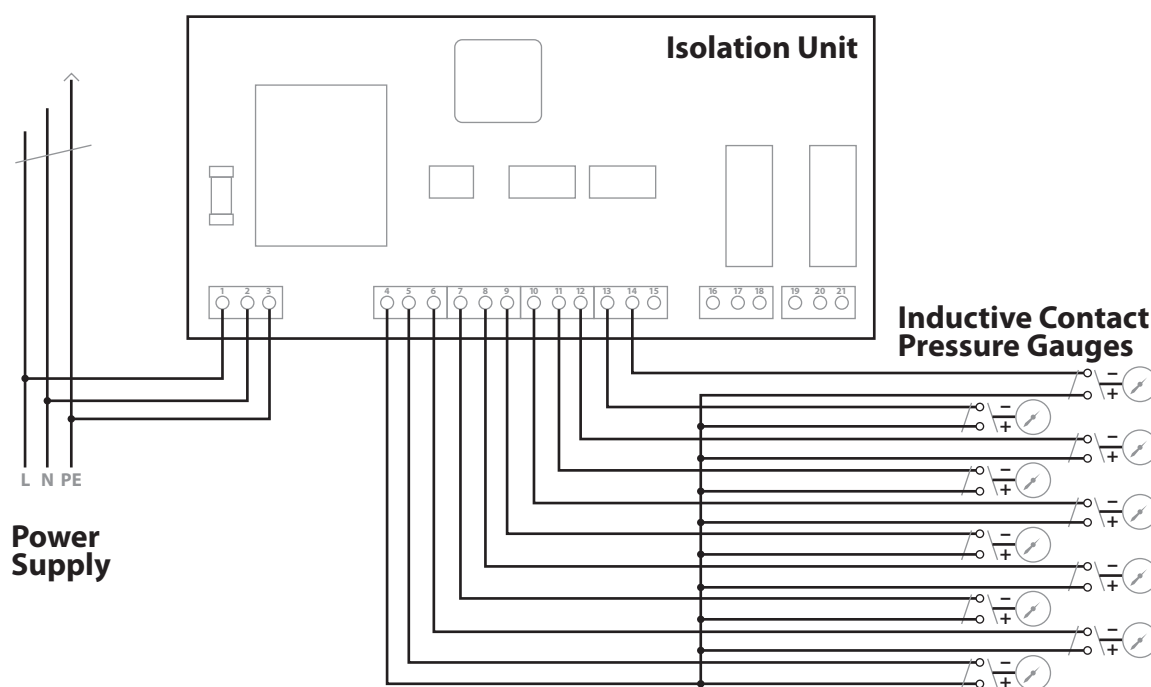
BA10 CONNECTION DIAGRAM



SPECIFICATIONS

Alarm	Acoustic and visual	Dimension	200 x 120 x 60 (mm)	Fuse	250 Vca/315 mA
Power display	Green light	Temperature range	-20°C to + 60°C -4°F to + 140°F	Connections	3 (BA 10) 10 (BA 11)
Empty cylinder display	Yellow light	Power supply	230 VCA / 50Hz	Contact gauges	Sliding or ind. (NO / NC)
Fault display	Red light	Contact gauge supply	5 Vcc / 10 mA	Explosive area use	"Ex" version only
Housing	IP 54	Alarm transfers	230 Vca / 65 Vcc 1A (max.)		

BA11 CONNECTION DIAGRAM



PRODUCT CONFIGURATOR

BA	Alarm unit type		Version	
	10	11	EX	STD
3 contacts	10	Standard version	STD	
10 contacts	11	Explosive Atmosphere version	EX	

PRESSURE GAUGES

Spare part pressure gauges for ROTAREX regulators, points of use, supply boards or switch over boards

PRESSURE GAUGES

- ★ Standard or contact versions available
- ★ Vertical or rear mounting connections

Special requirements on request

KEY FEATURES

- Radial (6 o'clock) or back mounting
- Connection :
M10 x 1 male, 1/4NPT male or G 1/4 male
- Many pressure ranges available
- Material: cuprous alloy or stainless steel
- Standard or contact gauge
- Accuracy class: 1,6 (standard gauge)
- Nominal diameter: Ø 63/50/40/36 mm

OPTIONS

- Different connections
- Different diameters

Sliding contact gauge

- Normally Open (No)
- Accuracy class: 2,5
- Adjustment of switching point with a key
- Contact load ≤ 10 Watt/10 VA.
- Switching current min. 20 mA, max. 500 mA.
- Cable length 2 m, cable outlet left-hand
- Cannot be used with explosive or combustive gases

Inductive contact gauge

- Normally Open (NO)
- Accuracy class: 2,5
- Adjustment by twisting of contact hood
- Contact-free "contact release" without wear
- Cable length 2 m, cable outlet right-hand
- Compatible with explosive or combustive gases

CONTACT VERSION



Available with vertical or rear mounting connections (normally open)

VERTICAL MOUNTING CONNECTION (6 o'clock)



REAR MOUNTING CONNECTION



STANDARD PRESSURE GAUGES

Ø63

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø63	0 + 1,5 + 2,5 bar	Cuprous alloy	Vertical	M10 x 1	No	33333333756
Ø63	0 + 10 + 16 bar	Cuprous alloy	Vertical	M10 x 1	No	290002990001
Ø63	0 + 10 + 16 bar	Cuprous alloy	Vertical	M10 x 1	No	33333333757
Ø63	0 + 27 + 40 bar	Cuprous alloy	Vertical	M10 x 1	No	On demand
Ø63	0 + 200 + 315 bar	Cuprous alloy	Vertical	M10 x 1	No	290002990000
Ø63	0 + 200 + 315 bar	Cuprous alloy	Vertical	M10 x 1	No	On demand
Ø63	0 + 0,6 bar	Cuprous alloy	Vertical	G ¼	No	On demand
Ø63	0 + 1,5 + 2,5 bar	Cuprous alloy	Vertical	G ¼	No	On demand
Ø63	0 + 4,2 + 6 bar	Cuprous alloy	Vertical	G ¼	No	On demand
Ø63	0 + 4,2 + 6 bar	Cuprous alloy	Vertical	G ¼	No	292800990003
Ø63	0 + 10 + 16 bar	Cuprous alloy	Vertical	G ¼	No	292822990000
Ø63	0 + 10 + 16 bar	Cuprous alloy	Vertical	G ¼	No	290204990001
Ø63	0 + 27 + 40 bar	Cuprous alloy	Vertical	G ¼	No	On demand
Ø63	0 + 27 + 40 bar	Cuprous alloy	Vertical	G ¼	No	On demand
Ø63	0 + 27 + 40 bar	Cuprous alloy	Vertical	G ¼	No	On demand
Ø63	0 + 200 + 315 bar	Cuprous alloy	Vertical	G ¼	No	On demand
Ø63	0 + 200 + 315 bar	Cuprous alloy	Vertical	G ¼	No	On demand
Ø63	0 + 27 + 40 bar	Cuprous alloy	Vertical	M10 x 1	No	On demand
Ø63	0 + 10 + 16 bar	Cuprous alloy	Rear	½ NPT	No	On demand
Ø63	0 + 0,4 bar	Stainless steel	Vertical	G ¼	No	On demand
Ø63	0 + 0,14 + 0,20 bar	Stainless steel	Vertical	¼ NPT	No	333333334547

Ø50 M10 X 1 MALE VERTICAL FOR BRASS REGULATOR

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	0 + 0,1 + 0,16 bar	Cuprous alloy	Vertical	M10 x 1	No	360025990000
Ø50	-1 + 1 + 1,5 bar	Cuprous alloy	Vertical	M10 x 1	No	320000990020
Ø50	-1 + 1,5 + 2,5 bar	Cuprous alloy	Vertical	M10 x 1	No	360026990000
Ø50	-1 + 3 + 5 bar	Cuprous alloy	Vertical	M10 x 1	No	360003990002
Ø50	-1 + 4 + 6 bar	Cuprous alloy	Vertical	M10 x 1	No	333333334879
Ø50	-1 + 8 + 12 bar	Cuprous alloy	Vertical	M10 x 1	No	299121990000
Ø50	-1 + 10 + 15 bar	Cuprous alloy	Vertical	M10 x 1	No	299108990002
Ø50	0 + 16 + 25 bar	Cuprous alloy	Vertical	M10 x 1	No	299091990001
Ø50	0 + 30 + 40 bar	Cuprous alloy	Vertical	M10 x 1	No	320203990000
Ø50	0 + 40 + 60 bar	Cuprous alloy	Vertical	M10 x 1	No	301200990002
Ø50	0 + 70 + 100 bar	Cuprous alloy	Vertical	M10 x 1	No	300602990003
Ø50	0 + 200 + 315 bar	Cuprous alloy	Vertical	M10 x 1	No	360000990007
Ø50	0 + 300 + 400 bar	Cuprous alloy	Vertical	M10 x 1	No	350000990004

Ø50 M10 X 1 MALE VERTICAL FOR STAINLESS STEEL REGULATOR

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	-1 + 1 + 1,5 bar	Stainless steel	Vertical	M10 x 1	No	360031990000
Ø50	-1 + 2 + 3 bar	Stainless steel	Vertical	M10 x 1	No	333333332860
Ø50	-1 + 3 + 5 bar	Stainless steel	Vertical	M10 x 1	No	320200990004
Ø50	-1 + 4 + 6 bar	Stainless steel	Vertical	M10 x 1	No	300800990004
Ø50	-1 + 6 + 9 bar	Stainless steel	Vertical	M10 x 1	No	333333332665
Ø50	-1 + 8 + 12 bar	Stainless steel	Vertical	M10 x 1	No	360029990000
Ø50	-1 + 10 + 15 bar	Stainless steel	Vertical	M10 x 1	No	299174990002
Ø50	0 + 16 + 25 bar	Stainless steel	Vertical	M10 x 1	No	360030990000
Ø50	0 + 30 + 40 bar	Stainless steel	Vertical	M10 x 1	No	299108990000
Ø50	0 + 40 + 60 bar	Stainless steel	Vertical	M10 x 1	No	333333333637
Ø50	0 + 70 + 100 bar	Stainless steel	Vertical	M10 x 1	No	300600990012
Ø50	0 + 200 + 315 bar	Stainless steel	Vertical	M10 x 1	No	300600990005
Ø50	0 + 300 + 400 bar	Stainless steel	Vertical	M10 x 1	No	300600990011

STANDARD PRESSURE GAUGES (continued)

Ø50 M10 X 1 MALE WITH REAR CONNECTION FOR BRASS PANEL

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	0 + 0,1 + 0,16 bar	Cuprous alloy	Rear	M10 x 1	No	On demand
Ø50	-1 + 1 + 1,5 bar	Cuprous alloy	Rear	M10 x 1	No	33333334018
Ø50	-1 + 1,5 + 2,5 bar	Cuprous alloy	Rear	M10 x 1	No	On demand
Ø50	-1 + 3 + 5 bar	Cuprous alloy	Rear	M10 x 1	No	320200990006
Ø50	-1 + 10 + 15 bar	Cuprous alloy	Rear	M10 x 1	No	390000990030
Ø50	0 + 16 + 25 bar	Cuprous alloy	Rear	M10 x 1	No	360015990001
Ø50	0 + 30 + 40 bar	Cuprous alloy	Rear	M10 x 1	No	299178990025
Ø50	0 + 30 + 40 bar	Cuprous alloy	Rear	M10 x 1	No	390093990001
Ø50	0 + 70 + 100 bar	Cuprous alloy	Rear	M10 x 1	No	360015990000
Ø50	0 + 200 + 315 bar	Cuprous alloy	Rear	M10 x 1	No	299178990024
Ø50	0 + 300 + 400 bar	Cuprous alloy	Rear	M10 x 1	No	299216990005

Ø50 M10 X 1 MALE WITH REAR CONNECTION FOR STAINLESS STEEL PANEL

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	-1 + 1 + 1,5 bar	Stainless steel	Rear	M10 x 1	No	On demand
Ø50	-1 + 3 + 5 bar	Stainless steel	Rear	M10 x 1	No	33333332251
Ø50	-1 + 8 + 12 bar	Stainless steel	Rear	M10 x 1	No	299182990003
Ø50	-1 + 10 + 15 bar	Stainless steel	Rear	M10 x 1	No	390000990031
Ø50	0 + 16 + 25 bar	Stainless steel	Rear	M10 x 1	No	390000990019
Ø50	0 + 30 + 40 bar	Stainless steel	Rear	M10 x 1	No	299111990002
Ø50	0 + 70 + 100 bar	Stainless steel	Rear	M10 x 1	No	33333334599
Ø50	0 + 200 + 315 bar	Stainless steel	Rear	M10 x 1	No	390000990020

Ø50 ¼ NPT MALE VERTICAL FOR BRASS REGULATOR

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	0 + 0,10 + 0,16 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	0 + 0,14 + 0,20 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	-1 + 1 + 1,5 bar	Cuprous alloy	Vertical	¼ NPT	No	320000990023
Ø50	-1 + 1,5 + 2,5 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	-1 + 3 + 5 bar	Cuprous alloy	Vertical	¼ NPT	No	320401990000
Ø50	-1 + 8 + 15 bar	Cuprous alloy	Vertical	¼ NPT	No	320401990000
Ø50	-1 + 10 + 15 bar	Cuprous alloy	Vertical	¼ NPT	No	33333333279
Ø50	0 + 16 + 25 bar	Cuprous alloy	Vertical	¼ NPT	No	33333333469
Ø50	0 + 30 + 40 bar	Cuprous alloy	Vertical	¼ NPT	No	33333333513
Ø50	0 + 40 + 60 bar	Cuprous alloy	Vertical	¼ NPT	No	293500990001
Ø50	0 + 70 + 100 bar	Cuprous alloy	Vertical	¼ NPT	No	33333333514
Ø50	0 + 200 + 315 bar	Cuprous alloy	Vertical	¼ NPT	No	360001990003
Ø50	0 + 300 + 400 bar	Cuprous alloy	Vertical	¼ NPT	No	350002990001

Ø50 ¼ NPT MALE VERTICAL FOR STAINLESS STEEL REGULATOR

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	1 + 1 + 1,5 bar	Stainless steel	Vertical	¼ NPT	No	33333334261
Ø50	-1 + 3 + 5 bar	Stainless steel	Vertical	¼ NPT	No	320301990000
Ø50	-1 + 8 + 15 bar	Stainless steel	Vertical	¼ NPT	No	320501990001
Ø50	-1 + 10 + 15 bar	Stainless steel	Vertical	¼ NPT	No	33333334160
Ø50	0 + 16 + 25 bar	Stainless steel	Vertical	¼ NPT	No	330011990000
Ø50	0 + 30 + 40 bar	Stainless steel	Vertical	¼ NPT	No	330012990000
Ø50	0 + 40 + 60 bar	Stainless steel	Vertical	¼ NPT	No	On demand
Ø50	0 + 70 + 100 bar	Stainless steel	Vertical	¼ NPT	No	330013990001
Ø50	0 + 200 + 315 bar	Stainless steel	Vertical	¼ NPT	No	330013990000
Ø50	0 + 300 + 400 bar	Stainless steel	Vertical	¼ NPT	No	On demand

STANDARD PRESSURE GAUGES (continued)

Ø50 ¼ NPT MALE VERTICAL FOR BRASS REGULATOR

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	0 + 1,5 + 2,5 bar	Cuprous alloy	Vertical	¼ NPT	No	292900990010
Ø50	0 + 1,6 + 2,5 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	0 + 6 + 10 bar	Cuprous alloy	Vertical	¼ NPT	No	33333333447
Ø50	0 + 10 + 16 bar	Cuprous alloy	Vertical	¼ NPT	No	292800990015
Ø50	0 + 10 + 16 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	0 + 10 + 16 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	0 + 10 + 16 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	0 + 16 + 25 bar	Cuprous alloy	Vertical	¼ NPT	No	333333334343
Ø50	0 + 27 + 40 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	0 + 27 + 40 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	0 + 40 + 60 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	0 + 70 + 100 bar	Cuprous alloy	Vertical	¼ NPT	No	333333334344
Ø50	0 + 240 + 315 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	0 + 300 + 400 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	0 + 300 + 400 bar	Cuprous alloy	Vertical	¼ NPT	No	On demand
Ø50	0 + 300 + 400 bar	Cuprous alloy	Vertical	¼ NPT	No	299174990008

Ø50 M10 X 1 MALE WITH REAR CONNECTION FOR BRASS PANEL

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	0 + 1,5 + 2,5 bar	Cuprous alloy	Rear	¼ NPT	No	On demand
Ø50	0 + 1,6 + 2,5 bar	Cuprous alloy	Rear	¼ NPT	No	299178990032
Ø50	0 + 4 + 6 bar	Cuprous alloy	Rear	¼ NPT	No	On demand
Ø50	0 + 10 + 16 bar	Cuprous alloy	Rear	¼ NPT	No	On demand
Ø50	0 + 10 + 16 bar	Cuprous alloy	Rear	¼ NPT	No	299157990012
Ø50	0 + 16 + 25 bar	Cuprous alloy	Rear	¼ NPT	No	202511990002
Ø50	0 + 30 + 40 bar	Cuprous alloy	Rear	¼ NPT	No	333333332373
Ø50	0 + 30 + 40 bar	Cuprous alloy	Rear	¼ NPT	No	On demand
Ø50	0 + 40 + 60 bar	Cuprous alloy	Rear	¼ NPT	No	33333333804
Ø50	0 + 70 + 100 bar	Cuprous alloy	Rear	¼ NPT	No	299170990006
Ø50	0 + 200 + 315 bar	Cuprous alloy	Rear	¼ NPT	No	202520990028
Ø50	0 + 240 + 315 bar	Cuprous alloy	Rear	¼ NPT	No	On demand

Ø50 ¼ FEMALE METAL FACE SEAL VERTICAL FOR STAINLESS STEEL REGULATOR

Diameter	Scale	Material	Connection	Female thread	Contact	KIT part number
Ø50	-1 + 11 + 15 bar	Stainless steel	Vertical	¼ face seal	No	On demand
Ø50	0 + 187 + 250 bar	Stainless steel	Vertical	¼ face seal	No	33333333875

Ø50 ¼ MALE METAL FACE SEAL REAR CONNECTION FOR STAINLESS STEEL PANEL

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	0 + 10 + 14 bar	Stainless steel	Rear	¼ face seal	No	On demand
Ø50	0 + 16 + 25 bar	Stainless steel	Rear	¼ face seal	No	On demand
Ø50	0 + 310 + 414 bar	Stainless steel	Rear	¼ face seal	No	On demand

Ø50 ⅜ NPT MALE REAR CONNECTION FOR BRASS PANEL

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	0 + 800 psi	Cuprous alloy	Rear	⅜ NPT	No	On demand
Ø50	0 + 27 + 36 psi	Cuprous alloy	Rear	⅜ NPT	No	On demand
Ø50	0 + 440 + 580 psi	Cuprous alloy	Rear	⅜ NPT	No	33333333499
Ø50	0 + 3400 + 4568 psi	Cuprous alloy	Rear	⅜ NPT	No	On demand
Ø50	0 + 200 + 315 bar	Cuprous alloy	Rear	⅜ NPT	No	390087990005

STANDARD PRESSURE GAUGES (continued)

Ø50 ½ NPT MALE REAR CONNECTION FOR STAINLESS STEEL PANEL

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	0 + 200 + 315 bar	Stainless steel	Rear	½ NPT	No	33333333434

Ø40

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø40	0 + 240 + 315 bar	Cuprous alloy	Vertical	G ¼	No	On demand
Ø40	0 + 200 + 315 bar	Cuprous alloy	Vertical	G ½	No	On demand
Ø40	0 + 200 + 315 bar	Cuprous alloy	Vertical	G ¾	No	On demand
Ø40	0 + 200 + 315 bar	Cuprous alloy	Vertical	G 1 ¼	No	33333333881
Ø40	0 + 300 + 400 bar	Cuprous alloy	Vertical	G 1 ½	No	On demand
Ø40	0 + 200 + 315 bar	Cuprous alloy	Vertical	M10 x 1	No	299090820903
Ø40	0 + 10 + 15 bar	Cuprous alloy	Vertical	M10 x 1	No	299001990005
Ø40	0 + 16 + 25 bar	Cuprous alloy	Vertical	M10 x 1	No	On demand
Ø40	0 + 200 + 315 bar	Cuprous alloy	Vertical	M10 x 1	No	On demand
Ø40	0 + 175 bar	Cuprous alloy	Rear	½ NPT	No	On demand
Ø40	0 + 200 + 315 bar	Cuprous alloy	Rear	½ NPT	No	On demand
Ø40	0 + 200 + 315 bar	Cuprous alloy	Rear	½ NPT	No	On demand
Ø40	0 + 240 + 315 bar	Cuprous alloy	Rear	G ¼	No	On demand
Ø40	0 + 240 + 315 bar	Cuprous alloy	Rear	G ½	No	On demand
Ø40	0 + 200 + 315 bar	Cuprous alloy	Rear	G ¾	No	On demand
Ø40	0 + 300 + 400 bar	Cuprous alloy	Rear	G 1 ¼	No	On demand
Ø40	0 + 300 + 400 bar	Cuprous alloy	Rear	G 1 ½	No	On demand
Ø40	-1 + 1 + 1,5 bar	Cuprous alloy	Rear	M10 x 1	No	On demand
Ø40	-1 + 1,5 + 2,5 bar	Cuprous alloy	Rear	M10 x 1	No	On demand
Ø40	-1 + 2,5 + 5 bar	Cuprous alloy	Rear	M10 x 1	No	333333334833
Ø40	-1 + 3 + 5 bar	Cuprous alloy	Rear	M10 x 1	No	390000990032
Ø40	-1 + 4 + 6 bar	Cuprous alloy	Rear	M10 x 1	No	On demand
Ø40	-1 + 8 + 12 bar	Cuprous alloy	Rear	M10 x 1	No	333333333000
Ø40	-1 + 10 + 15 bar	Cuprous alloy	Rear	M10 x 1	No	390000990037
Ø40	-1 + 1 + 1,5 bar	Stainless steel	Rear	M10 x 1	No	On demand
Ø40	-1 + 1,5 + 2,5 bar	Stainless steel	Rear	M10 x 1	No	On demand
Ø40	-1 + 2,5 + 5 bar	Stainless steel	Rear	M10 x 1	No	On demand
Ø40	-1 + 3 + 5 bar	Stainless steel	Rear	M10 x 1	No	299303990000
Ø40	-1 + 4 + 6 bar	Stainless steel	Rear	M10 x 1	No	On demand
Ø40	-1 + 5 + 8 bar	Stainless steel	Rear	M10 x 1	No	On demand
Ø40	-1 + 8 + 12 bar	Stainless steel	Rear	M10 x 1	No	333333333906
Ø40	-1 + 10 + 15 bar	Stainless steel	Rear	M10 x 1	No	333333334834
Ø40	1 + 12 + 16 bar	Stainless steel	Rear	M10 x 1	No	333333333944
Ø40	0 + 40 + 60 bar	Stainless steel	Rear	M10 x 1	No	On demand
Ø40	0 + 50 + 70 bar	Stainless steel	Rear	½ NPT	No	333333333145
Ø40	0 + 160 + 205 bar	Stainless steel	Rear	½ NPT	No	On demand
Ø40	0 + 200 + 315 bar	Stainless steel	Rear	½ NPT	No	On demand
Ø40	0 + 200 + 315 bar	Stainless steel	Rear	G 1 ½	No	On demand

Ø36

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø36	0 + 750 + 1000 psi	Cuprous alloy	Rear	½ NPT	No	On demand
Ø36	0 + 2250 + 3000 psi	Cuprous alloy	Rear	½ NPT	No	On demand
Ø36	0 + 207 + 275 bar	Stainless steel	Rear	½ NPT	No	On demand

CONTACT PRESSURE GAUGES

NORMALLY OPEN CONTACT PRESSURE GAUGE, Ø50 M10 X 1 MALE VERTICAL CONNECTION

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	0 + 16 bar	Cuprous alloy	Vertical	M10 x 1	Inductive	On demand
Ø50	0 + 300 + 400 bar	Cuprous alloy	Vertical	M10 x 1	Inductive	360021990001
Ø50	0 + 400 bar	Cuprous alloy	Vertical	M10 x 1	Sliding	390000990013

NORMALLY OPEN CONTACT PRESSURE GAUGE, Ø50 M10 X 1 MALE REAR CONNECTION

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	0 + 16 bar	Cuprous alloy	Rear	M10 x 1	Inductive	390001990004
Ø50	0 + 40 bar	Cuprous alloy	Rear	M10 x 1	Inductive	299178990028
Ø50	0 + 100 bar	Cuprous alloy	Rear	M10 x 1	Inductive	On demand
Ø50	0 + 100 bar	Cuprous alloy	Rear	M10 x 1	Sliding	On demand
Ø50	0 + 250 bar	Cuprous alloy	Rear	M10 x 1	Sliding	390000990011
Ø50	0 + 250 bar	Cuprous alloy	Rear	M10 x 1	Inductive	390000990012
Ø50	0 + 400 bar	Cuprous alloy	Rear	M10 x 1	Inductive	390003990002
Ø50	0 + 400 bar	Cuprous alloy	Rear	M10 x 1	Sliding	On demand
Ø50	0 + 250 bar	Cuprous alloy	Rear	M10 x 1	Sliding	On demand
Ø50	0 + 16 bar	Stainless steel	Rear	M10 x 1	Inductive	On demand
Ø50	0 + 40 bar	Stainless steel	Rear	M10 x 1	Inductive	333333334560
Ø50	0 + 100 bar	Stainless steel	Rear	M10 x 1	Sliding	On demand
Ø50	0 + 100 bar	Stainless steel	Rear	M10 x 1	Inductive	On demand
Ø50	0 + 250 bar	Stainless steel	Rear	M10 x 1	Sliding	390014990002
Ø50	0 + 250 bar	Stainless steel	Rear	M10 x 1	Inductive	390014990003
Ø50	0 + 400 bar	Stainless steel	Rear	M10 x 1	Sliding	On demand
Ø50	0 + 400 bar	Stainless steel	Rear	M10 x 1	Inductive	333333334568

NORMALLY OPEN CONTACT PRESSURE GAUGE, Ø50 ¼ FEMALE METAL FACE SEAL VERTICAL CONNECTION

Diameter	Scale	Material	Connection	Female thread	Contact	KIT part number
Ø50	-1 + 9 bar	Stainless steel	Vertical	¼ face seal	Inductive	On demand
Ø50	0 + 16 bar	Stainless steel	Vertical	¼ face seal	Inductive	On demand
Ø50	0 + 40 bar	Stainless steel	Vertical	¼ face seal	Inductive	On demand
Ø50	0 + 100 bar	Stainless steel	Vertical	¼ face seal	Sliding	On demand
Ø50	0 + 250 bar	Stainless steel	Vertical	¼ face seal	Sliding	On demand

NORMALLY OPEN CONTACT PRESSURE GAUGE, Ø50 M: ¼ METAL FACE SEAL REAR CONNECTION

Diameter	Scale	Material	Connection	Male thread	Contact	KIT part number
Ø50	0 + 40 bar	Stainless steel	Rear	¼ face seal	Sliding	On demand
Ø50	0 + 250 bar	Stainless steel	Rear	¼ face seal	Sliding	On demand
Ø50	0 + 250 bar	Stainless steel	Rear	¼ face seal	Inductive	On demand

CEN EXT/TD EXT | EXTENSIONS

Left or right, 2 or 3 cylinders extension for supply board (CM or MOD series) and switch over board (TD or CEN series)

EXTENSIONS

- ★ For supply boards and switch over boards
- ★ 2 or 3 cylinders version

Special requirements on request

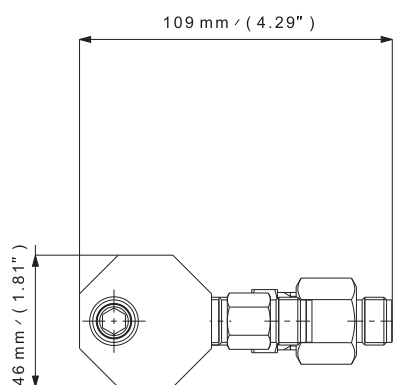
KEY FEATURES

- High pressure header to connect cylinder batteries available for various gases
- 2 or 3 cylinder version
- Standard inlet: G $\frac{3}{8}$ - Male
- Standard outlet: G $\frac{3}{8}$ - Female
- With plate for TD, CM series (option for CEN & MOD series)

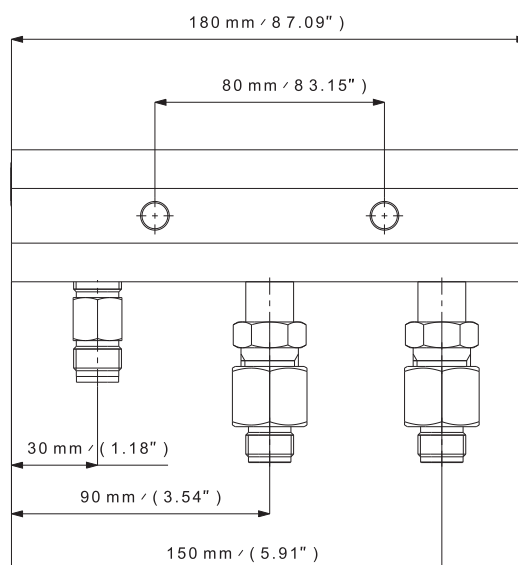
OPTIONS

- $\frac{1}{4}$ NPT inlet connection adaptor
- Plate for CEN & MOD extension
- Shut off valves
- Non-return valve (type C or E)
- Flexible hose for connection with cylinders

CEN & MOD EXTENSION

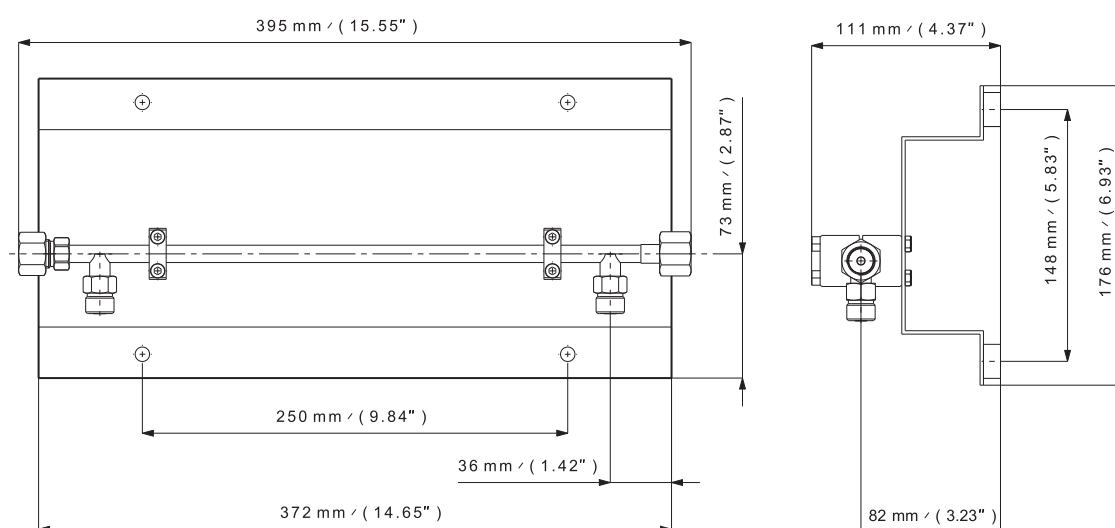


TD & CM SERIES EXTENSION



SPECIFICATIONS

Material	Raw brass (CEN & MOD) or Stainless steel (TD & CM)	Temperature range	-20°C to +60°C -4°F to +140°F	Ports (outlet)	G 3/8 - Female
Gasket	PA 6.6 (CEN & MOD versions)	Inlet pressure max.	300 bar 4350 psi	Shut-off valves	Option
O-ring	EPDM - standard NBR FPM	Seat orifice size	Ø 4 mm (TDL version)	Oxygen use	OK
Plate	Option (CEN & MOD versions) Standard (TD & CM versions)	Connections	2 or 3 cylinders		
Leak rate	10 ⁻⁸ mbar ℓ/s He	Ports (inlet)	G 3/8 - Male, AFNOR - type C or type E		



PRODUCT CONFIGURATOR

	Product		Number of cylinder		Extension Side		O-ring Material	End Connections		Plate	
EXTENSION	TD 200		3C		L		EPDM	G		P	
	MOD - supply board	MOD	Extension for 2 cylinders	2C	Left extension	L	EPDM - standard	In: G 3/8 - Male Out: G 3/8 - Female	G	Without Plate (CEN & MOD only)	N
	CEN - switch over board	CEN	Extension for 3 cylinders	3C	Right extension	R	NBR	In: AFNOR C type Out: G 3/8 - Female	C	With plate	P
	CM 200 - supply board	CM 200					FPM	In: AFNOR E type Out: G 3/8 - Female	E		
	TD 200 - switch over board	TD 200									
	CM 500 - supply board	CM 500									
	TD 500 - switch over board	TD 500									

PIGTAILS

Straight or elbow pigtail ideally suited to connect CM series supply boards or TD series switch over boards to gas cylinders

PIGTAILS

- ★ high pressure
- ★ straight or elbow
- ★ stainless steel, electro polished

Special requirements on request

KEY FEATURES

- Cylinder connector according the following standard:
 - AFNOR, DIN, NEN, UNI...
 - Other connections: on demand
- Outlet connections: G 3/8 - Female
- Material: stainless steel, electro polished

OPTIONS

- Different outlet connection
- Shut off valve

STRAIGHT VERSION

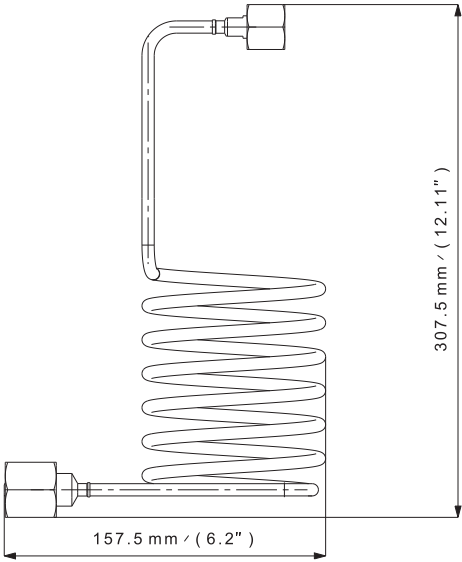


ELBOW VERSION



PRODUCT CONFIGURATOR

PIGTAIL	STANDARD		GAS	VERSION	
	AFNOR		O2	S	
	French standard	AFNOR	Please indicate gas type	Straight version	S
	German standard	DIN		Elbow version	E
	British standard	BS			
	American standard	CGA			
	Italian standard	UNI			
	Dutch standard	NEN			
	G 3/8 - Female inlet connection	G			



DUOBLOC | 3 INLETS/2 OUTLETS MONOBLOCK VALVES

Monoblock valves with 3 common inlets and 2 manual and multi-turn shut off valves for various pure gases

MONOBLOCK VALVES

- ★ 200 bar or 300 bar
- ★ Multi-turn
- ★ 3 inlets/2 outlets

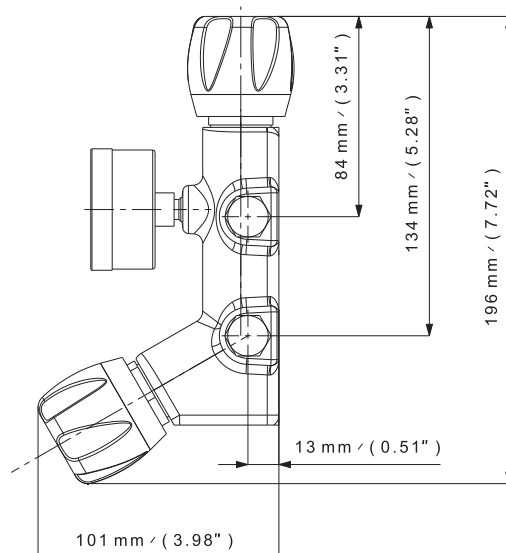
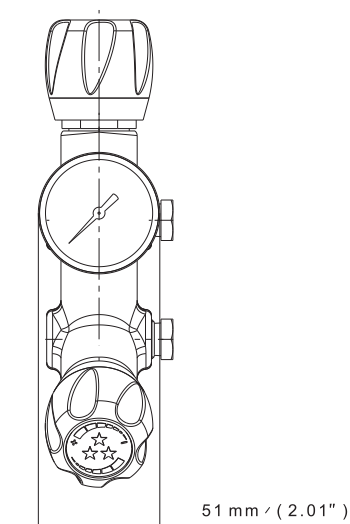
Special requirements on request

KEY FEATURES

- Purity up to 6.0
- Multi-turn version
- Raw brass, chrome plated brass or stainless steel
- 3 common inlets
- 2 manual shut off valves with non-rotating seat disc holder (brass version), with diaphragm (stainless steel version)
- 1 high pressure gauge
- Standard inlet/outlet: G $\frac{3}{8}$ - Female
- Rear thread for panel mounting
- Stainless steel version only available in 200 bar

OPTIONS

- Various inlet/outlet connections including $\frac{3}{8}$ NPT - Male, $\frac{1}{4}$ NPT - Female
- NBR or FPM O-ring
- Many inlet/outlet fittings available



SPECIFICATIONS

Female ports	G 3/8, 1/4 NPT or 3/8 NPT (inlet/outlet)	Weight	± 1,3 kg ± 2.87 lbs	Inlet pressure	200 bar / 300 bar 2900 psi / 4350 psi
Seat seal	PA 6.6 (brass version) PCTFE (SS version)	Leak rate	3.10 ⁻⁷ mbar l/s He	Flow coefficient	Cv 0.208, Kv 0,18 (main in) Cv 0.220, Kv 0,19 (lateral)
O-ring	EPDM - standard NBR FPM	Temperature range	-20°C to + 50°C -4°F to + 122°F	Multi-turn hand-wheel	OK
Bottom tapered	OK			Oxygen use	OK (special O ₂ version)



Left inlets

Right inlets

PRODUCT CONFIGURATOR

	Inlet Pressure		Body Material		End Connections		Port Orientation		O-ring Material	Version	
DUOBLOC	200		L		G		LF		EPDM	STD	
	200 bar 2900 psi	200	Raw Brass	LB	G 3/8 - Female	G	Left inlets	LF	EPDM - standard	Standard	STD
	300 bar (brass only) 4350 psi	300	Chrome Plated Brass	L	NPT 1/4 - Female (L&I version)	N	Right Inlets	R	NBR	Oxygen use	O ₂
			Stainless steel	I	NPT 3/8 - Female (L&I version)	N3			FPM		

SV 10 SAFETY RELIEF VALVE

Equipped with a valve opening at the set up value to evacuate the over pressure build in the process

SAFETY RELIEF VALVE

- ★ Connectable
- ★ CE marked (97/23/CE)
- ★ AISI 303 or AISI 316L

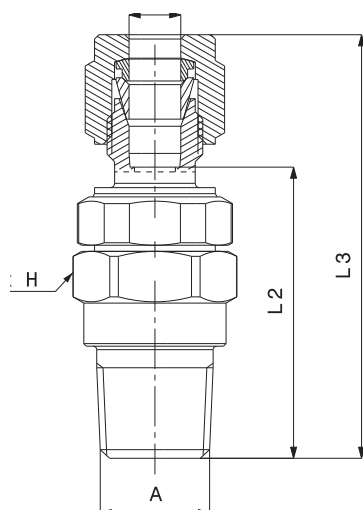
Special requirements on request

KEY FEATURES

- CE marked according to the European Directive 97/23/CE.
- Compatible with all Rotarex regulators, supply boards and switch over boards.
- Setup value defined.
- Small dimensions.
- Compatible with many gases (see table).
- Delivered with a P.A flat seal for the chrome-plated brass version and a PCTFE flat seal for the AISI 316L version.
- Delivered with the user manual.

OPTIONS

- The safety relief valve must be dimensioned in such a way that the pipe pressure will under no circumstances surpass the conception pressure of pipes, even when the safety valve is venting.
- The pressure in the pipe must not exceed the calculated value even when the device is open.



A : M: G 3/8, M: 1/4 NPT
 B : Ø6 mm or Ø1/4"
 H : hexagon of 17 mm on flats
 L1 : 27 mm
 L2 : approx. 37 mm
 L3 : approx. 51 mm



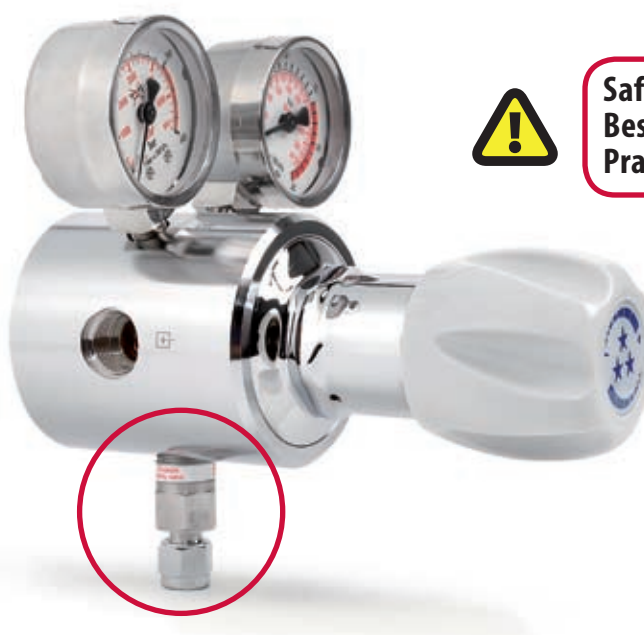
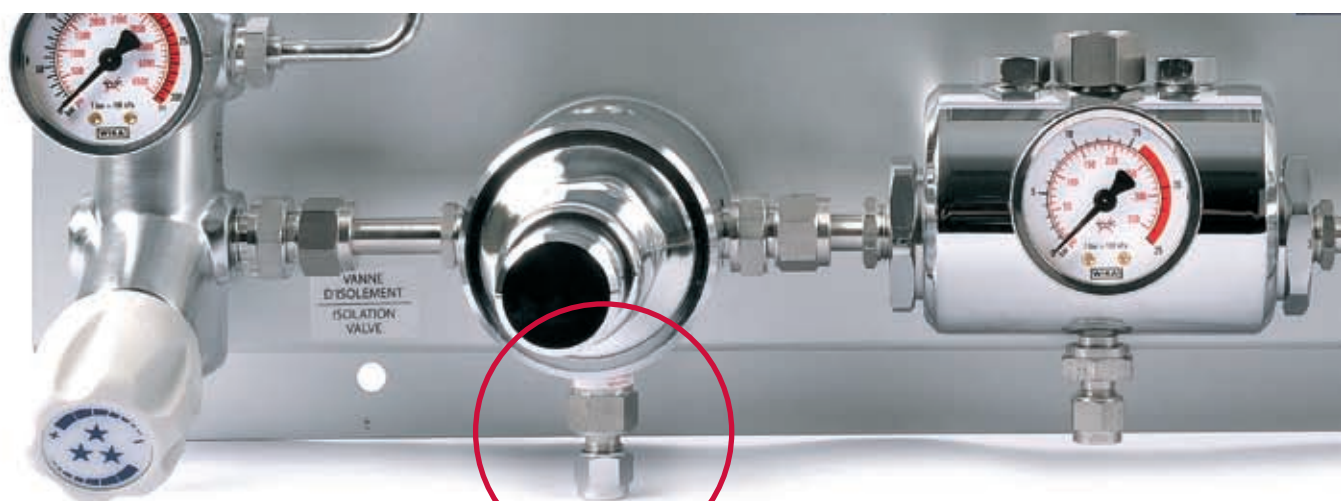
A FEW FLOW VALUES OF THE SAFETY SV 10 AT A PRESSURE 1.25 TIMES THE TIGHTNESS PRESSURE

Tightness pressure (marked on the body) In bar	2 bar	4 bar	5 bar	9 bar	11 bar	12 bar	16 bar	22 bar	24 bar	35 bar	50 bar	62 bar
Minimum flow for 1.25 x tightness pressure in m ³ /h - N ₂	*	7.6	9.8	17	21.4	23	30.2	38.1	43.4	57.5	77.4	107.1

*Minimum flow Q = 5,2 m³/h - N₂ with 3 bar inlet pressure

SPECIFICATIONS

Gasket	PA 6.6 (brass/AISI 303 version) PCTFE (AISI 316L version)	Gas with EPDM and stainless steel	CO ₂ , CO, He, N ₂ , Air, Ne, Kr, Xe, C ₂ H ₂ , NH ₃ , H ₂	Ports (inlet)	G 3/8 - Male or 1/4 NPT - Male
O-ring	EPDM FPM NBR	Gas with FPM and stainless steel	Ar, He, N ₂ , H ₂ , Air, Ne, Kr, Xe, C ₄ H ₁₀ , CH ₄ , C ₁₂ , O ₂	Ports (outlet)	DR 6 mm or 1/4"
Gas with NBR and brass	Ar, CO, He, N ₂ , H ₂ , Air, Ne, Kr, Xe, C ₄ H ₁₀ , CH ₄	Oxygen use	OK	Body	Chrome-plated brass/AISI 303 or AISI 316L
Gas with NBR and stainless steel	Ar, CO, He, N ₂ , H ₂ , Air, Ne, Kr, Xe, NH ₃ , C ₄ H ₁₀ , CH ₄	Tightness pressure	2 to 62 bar (29 to 900 psi)	Leak rate	10 ⁻⁷ mbar ℓ/s He
Gas with EPDM and brass	Ar, CO ₂ , CO, He, N ₂ , H ₂ , Air, Ne, Kr, Xe, C ₂ H ₂	Seat orifice size	Hexagonal Ø 2 mm	Temperature range	-20°C to +65°C -4°F to +149°F



**Safety
Best
Practice**

SV10 (cont'd)

CONNECTABLE SAFETY RELIEF VALVE - CE marked (97/23/CE)

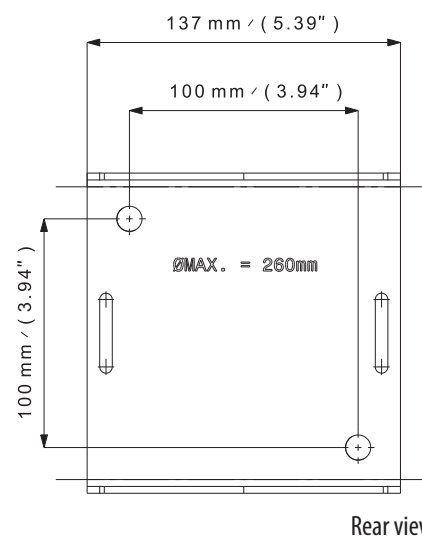
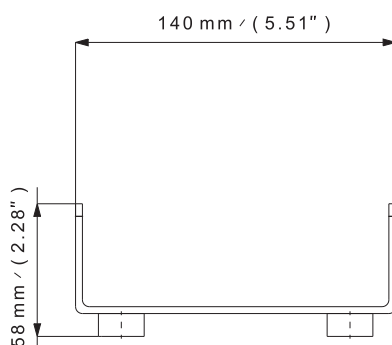
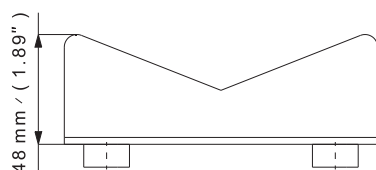
Tighness pressure	Material	Male inlet connection	Outlet connection (tube fitting)	O-Ring	Rotarex designation	Kit part number
2 bar	Brass + SS 303	G 3⁄8	DB 6mm	EPDM	KIT \ SOUP \ SV10 \ 2 bar \ G 3⁄8 \ LT \ EPDM \ DB6	380001990001
	Stainless steel 316L				KIT \ SOUP \ SV10 \ 2 bar \ G 3⁄8 \ 316L \ EPDM \ DB6	380001990301
4 bar	Brass + SS 303	G 3⁄8	DB 6mm	EPDM	KIT \ SOUP \ SV10 \ 4 bar \ G 3⁄8 \ LT \ EPDM \ DB6	380001990003
	Stainless steel 316L				KIT \ SOUP \ SV10 \ 4 bar \ G 3⁄8 \ 316L \ EPDM \ DB6	380001990302
5 bar	Brass + SS 303	G 3⁄8	DB 6mm	EPDM	KIT \ SOUP \ SV10 \ 5 bar \ G 3⁄8 \ LT \ EPDM \ DB6	380001990004
	KIT \ SOUP \ SV10 \ 5 bar \ G 3⁄8 \ 316L \ EPDM \ DB6				380001990303	
	Stainless steel 316L			FPM	KIT \ SOUP \ SV10 \ 5 bar \ G 3⁄8 \ 316L \ EPDM \ DB6	380001990304
9 bar	Brass + SS 303	G 3⁄8	DB 6mm	EPDM	KIT \ SOUP \ SV10 \ 9 bar \ G 3⁄8 \ LT \ EPDM \ DB6	380001990005
	KIT \ SOUP \ SV10 \ 9 bar \ G 3⁄8 \ 316L \ EPDM \ DB6				380001990305	
	Stainless steel 316L			FPM	KIT \ SOUP \ SV10 \ 9 bar \ G 3⁄8 \ 316L \ FPM \ DB6	380001990306
11 bar	Brass + SS 303	G 3⁄8	DB 6mm	EPDM	KIT \ SOUP \ SV10 \ 11 bar \ G 3⁄8 \ LT \ EPDM \ DB6	380001990059
12 bar	Stainless steel 316L	G 3⁄8	DB 6mm	EPDM	KIT \ SOUP \ SV10 \ 12 bar \ G 3⁄8 \ 316L \ EPDM \ DB6	380001990307
16 bar	Brass + SS 303	G 3⁄8	DB 6mm	EPDM	KIT \ SOUP \ SV10 \ 16 bar \ G 3⁄8 \ LT \ EPDM \ DB6	380001990006
			DB ¼"		KIT \ SOUP \ SV10 \ 16 bar \ G 3⁄8 \ LT \ EPDM \ DB¼	380001990007
			DB 6mm	NBR	KIT \ SOUP \ SV10 \ 16 bar \ G 3⁄8 \ LT \ NBR \ DB6	380001990014
	Stainless steel 316L		DB 6mm	EPDM	KIT \ SOUP \ SV10 \ 16 bar \ G 3⁄8 \ 316L \ EPDM \ DB6	380001990308
			DB ¼"		KIT \ SOUP \ SV10 \ 16 bar \ G 3⁄8 \ 316L \ EPDM \ DB¼	380001990358
			DB 6mm	FPM	KIT \ SOUP \ SV10 \ 16 bar \ G 3⁄8 \ 316L \ FPM \ DB6	380001990309
			DB ¼"		KIT \ SOUP \ SV10 \ 16 bar \ G 3⁄8 \ 316L \ FPM \ DB¼	380001990310
			22 bar	Brass + SS 303	G 3⁄8	DB 6mm
KIT \ SOUP \ SV10 \ 22 bar \ G 3⁄8 \ 316L \ EPDM \ DB6	380001990311					
Stainless steel 316L	FPM	KIT \ SOUP \ SV10 \ 22 bar \ G 3⁄8 \ 316L \ FPM \ DB6		380001990313		
		KIT \ SOUP \ SV10 \ 22 bar \ G 3⁄8 \ 316L \ FPM \ DB6 \ ELE		380001990312		
24 bar	Brass + SS 303	G 3⁄8	DB 6mm	EPDM	KIT \ SOUP \ SV10 \ 24 bar \ G 3⁄8 \ LT \ EPDM \ DB6	380001990008
		¼ NPT			KIT \ SOUP \ SV10 \ 24 bar \ ¼ NPT \ LT \ EPDM \ DB6	380001990013
		G 3⁄8			KIT \ SOUP \ SV10 \ 24 bar \ G 3⁄8 \ 316L \ EPDM \ DB6	380001990320
	¼ NPT	KIT \ SOUP \ SV10 \ 24 bar \ ¼ NPT \ 316L \ EPDM \ DB6			380001990319	
	Stainless steel 316L	G 3⁄8		FPM	KIT \ SOUP \ SV10 \ 24 bar \ G 3⁄8 \ 316L \ FPM \ DB6	380001990356
35 bar	Brass + SS 303	G 3⁄8	DB 6mm	EPDM	KIT \ SOUP \ SV10 \ 35 bar \ G 3⁄8 \ LT \ EPDM \ DB6	380001990009
		¼ NPT			KIT \ SOUP \ SV10 \ 35 bar \ ¼ NPT \ LT \ EPDM \ DB6	380001990011
	Stainless steel 316L	G 3⁄8			KIT \ SOUP \ SV10 \ 35 bar \ G 3⁄8 \ 316L \ EPDM \ DB6	380001990314
		¼ NPT			KIT \ SOUP \ SV10 \ 35 bar \ ¼ NPT \ 316L \ EPDM \ DB6	380001990317
		G 3⁄8		FPM	KIT \ SOUP \ SV10 \ 35 bar \ G 3⁄8 \ 316L \ FPM \ DB6	380001990315
50 bar	Brass + SS 303	G 3⁄8	DB 6mm	EPDM	KIT \ SOUP \ SV10 \ 50 bar \ G 3⁄8 \ LT \ EPDM \ DB6	380001990060
	Stainless steel 316L				KIT \ SOUP \ SV10 \ 50 bar \ G 3⁄8 \ 316L \ EPDM \ DB6	380001990369
62 bar	Brass + SS 303	G 3⁄8	DB 6mm	EPDM	KIT \ SOUP \ SV10 \ 62 bar \ G 3⁄8 \ LT \ EPDM \ DB6	380001990010
		¼ NPT			KIT \ SOUP \ SV10 \ 62 bar \ ¼ NPT \ LT \ EPDM \ DB6	380001990012
	Stainless steel 316L	¼ NPT		FPM	KIT \ SOUP \ SV10 \ 62 bar \ ¼ NPT \ 316L \ FPM \ DB6	380001990318
		G 3⁄8		EPDM	KIT \ SOUP \ SV10 \ 62 bar \ G 3⁄8 \ 316L \ EPDM \ DB6	380001990357
				FPM	KIT \ SOUP \ SV10 \ 62 bar \ G 3⁄8 \ 316L \ FPM \ DB6	380001990316
320 psi	Stainless steel 316L	G 3⁄8	DB ¼"	FPM	KIT \ SOUP \ SV10 \ 320 psi \ G 3⁄8 \ 316L \ FPM \ DB¼	380001990365
		¼ NPT			KIT \ SOUP \ SV10 \ 320 psi \ ¼ NPT \ 316 \ FPM \ DB¼	380001990370
507 psi	Stainless steel 316L	G 3⁄8	DB ¼"	FPM	KIT \ SOUP \ SV10 \ 507 psi \ G 3⁄8 \ 316L \ FPM \ DB¼	380001990366
		¼ NPT			KIT \ SOUP \ SV10 \ 507 psi \ ¼ NPT \ 316 \ FPM \ DB¼	380001990371
725 psi	Stainless steel 316L	G 3⁄8	DB ¼"	FPM	KIT \ SOUP \ SV10 \ 725 psi \ G 3⁄8 \ 316L \ FPM \ DB¼	380001990367
		¼ NPT			KIT \ SOUP \ SV10 \ 725 psi \ ¼ NPT \ 316 \ FPM \ DB¼	380001990372
900 psi	Stainless steel 316L	G 3⁄8	DB ¼"	FPM	KIT \ SOUP \ SV10 \ 900 psi \ G 3⁄8 \ 316L \ FPM \ DB¼	380001990368
		¼ NPT			KIT \ SOUP \ SV10 \ 900 psi \ ¼ NPT \ 316 \ FPM \ DB¼	380001990373

GAS CYLINDER HOLDER

Designed for the storage of one or large number of gas cylinders in an appropriate area

- ★ Can be fixed permanently to the wall
- ★ Securely holds cylinder in place
- ★ Allows permanent designation of appropriate cylinder storage area
- ★ Delivered with a fixing belt
- ★ Many cylinder holders can be used together, side by side
- ★ Part number: 202500000007

Special requirements on request



GAS COMPATIBILITY

KEY TO GAS COMPATIBILITY:

Locate your gas type in the below chart and see the gas compatibility of each standard material type. Only select materials that are compatible with your gas type.

GAS COMPATIBILITY WITH MATERIALS

GAS		B or SS 316L	PA 6.6	PTFE	PCTFE	NBR	FPM (VITON®)	EPDM
Acetylene	C_2H_2	B		OK	OK			
Argon	Ar	B	OK	OK	OK	OK	OK	OK
Butane	C_4H_{10}	B	OK	OK	OK	OK	OK	
Carbon dioxide	CO_2	B	OK	OK	OK	OK		OK
Carbon monoxide	CO	B	OK	OK	OK	OK		OK
Ethane	C_2H_6	B	OK	OK	OK	OK	OK	
Helium	He	B	OK		OK	OK	OK	OK
Hydrogen	H_2	B	OK		OK	OK	OK	OK
Krypton	Kr	B	OK	OK	OK	OK	OK	
Methane	CH_4	B	OK	OK	OK	OK	OK	
Nitric Oxide	NO	SS 316L	Please consult - depends on proportion of NO in the mixture					
Nitrogen	N_2	B	OK	OK	OK	OK	OK	OK
Nitrous Oxide	N_2O	SS 316L	Please consult - depends on proportion of N_2O in the mixture					
Oxygen	O_2	B					OK	OK
Propane	C_3H_8	B	OK	OK	OK	OK		
Silane	SiH_4	SS 316L		OK	OK		OK	
Ammonia	NH_3	SS 316L	OK	OK	OK			OK
Ethylene	C_2H_4	B	OK	OK	OK			
Hydrogen Sulfide	H_2S	SS 316L	OK	OK	OK		OK	OK
Sulphur Dioxide	SO_2	SS 316L		OK	OK			OK
Sulphur Hexafluoride	SF_6	B	OK	OK	OK	OK	OK	OK

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Hastelloy® is a registered trademark of HAYNES INTERNATIONAL Inc.

CONVERSION CHARTS

FLOW CONVERSION

	m ³ /h	l/h	foot ³ /min	l/s	cm ³ /s
m ³ /h	1	1 x 10 ³	0.589	0,2778	277,78
l/h	1 x 10 ⁻³	1	5.885 x 10 ⁻⁴	2,778 x 10 ⁻⁴	0,2778
foot ³ /min	1,69	1,699 x 10 ³	1	0,4719	471,95
l/s	3,6	3,6 x 10 ³	2.119	1	10 ³
cm ³ /s	3,6 x 10 ⁻³	3,6	2.119 x 10 ⁻³	10 ⁻³	1

PRESSURE CONVERSION

	bar	mbar	kPa	MPa	atm	psi
bar	1	10 ³	100	0,1	0,987	14.5
mbar	10 ⁻³	1	0,1	10 ⁻⁴	9,869 x 10 ⁻⁴	14.5 x 10 ⁻³
kPa	10 ⁻²	10	1	10 ⁻³	9,869 x 10 ⁻³	0.145
MPa	10	10 ⁴	10 ³	1	9,869	145
atm	1,013	1013	101,3	1,013 x 10 ⁻¹	1	14.69
psi	6,89 x 10 ⁻²	68,9	6,89	6,89 x 10 ⁻³	6,8 x 10 ⁻²	1

TEMPERATURE

°C	°F	K°	R°
-20	-4	253	456
-10	14	263	474
0	32	273	492
10	50	283	510
20	68	293	528
30	86	303	546
40	104	313	564
50	122	323	582
60	140	333	600
70	158	343	618
80	176	353	636
90	194	363	654
100	212	373	672
200	392	473	852
300	572	573	1032
400	752	673	1212
500	932	773	1392
600	1112	873	1572
700	1292	973	1752
800	1472	1073	1932
900	1652	1173	2112
1000	1832	1273	2292

DIMENSION

metric	inches	inch fractional	inch decimal	metric (mm)
3	0.135	1/16"	0.063	1,59
6	0.270	1/8"	0.125	3,18
8	0.360	3/16"	0.188	4,76
10	0.450	1/4"	0.250	6,35
12	0.540	5/16"	0.313	7,94
14	0.630	3/8"	0.375	9,53
16	0.720	1/2"	0.500	12,70
18	0.810	7/16"	0.438	11,11
20	0.900	5/8"	0.625	15,88
22	0.990	3/4"	0.750	19,05
25	1.125	7/8"	0.875	22,23
		1"	1.000	25,40

A WORLD OF GAS SOLUTIONS

COMPLETE SOLUTIONS FROM SOURCE TO PROCESS.

ROTAREX is helping engineers worldwide to get better gas results: from ultra high purity production and medical care facilities to industrial and LPG applications, as well as alternative energy vehicles, fire suppression, diving, aerospace, cryogenics, laboratory, petro-chemical and welding. ROTAREX applies over 90 years of know-how and experience to custom design, develop and manufacture the high performance valves, regulators and fittings to suit your needs, all in one hand. Discover the difference ROTAREX can make in your world.

CYLINDER VALVES

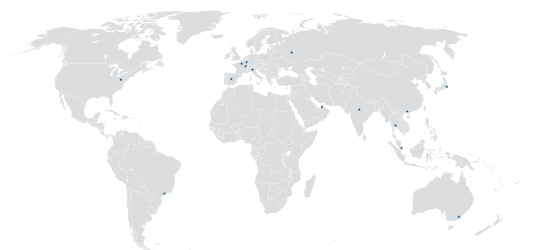
EQUIPMENT

FIRETEC

AUTOMOTIVE

LPG/SRG

MEDITEC

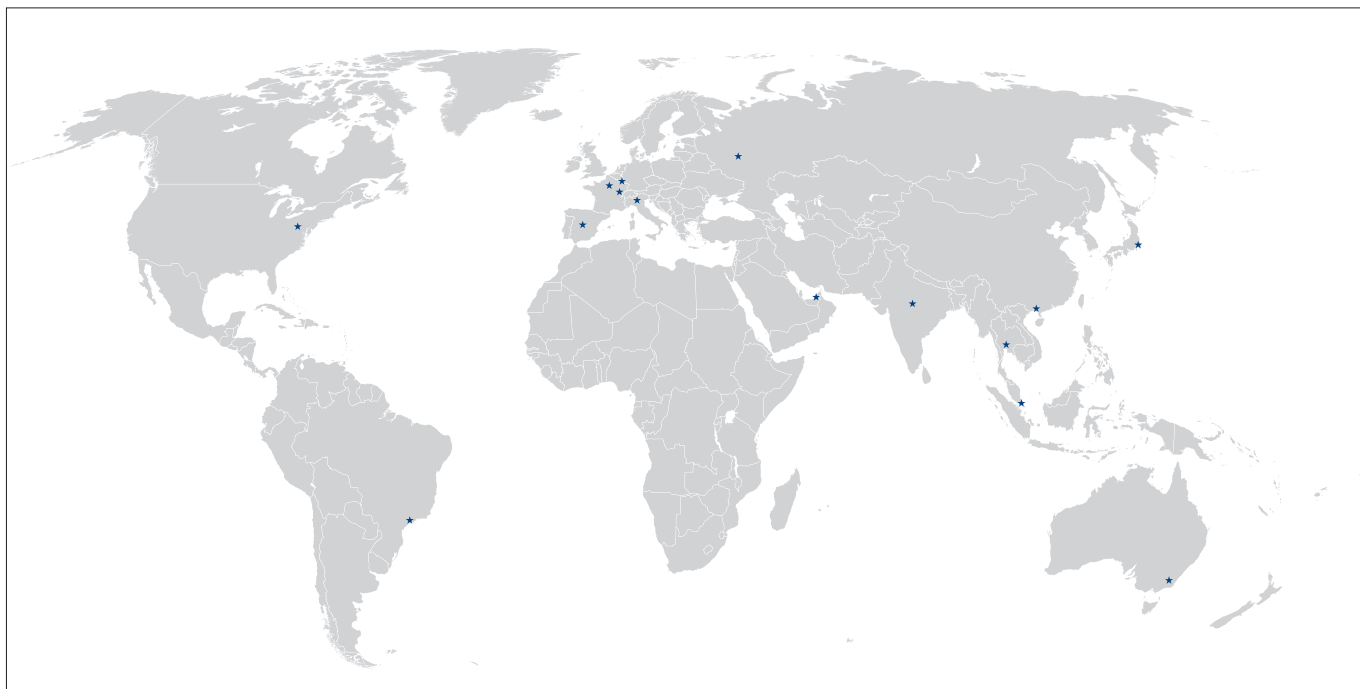


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